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Farm and Ranch REVIEW

MARCH, 1954

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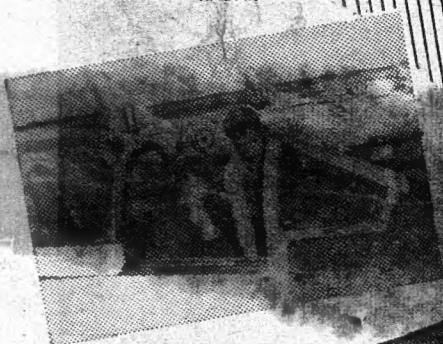
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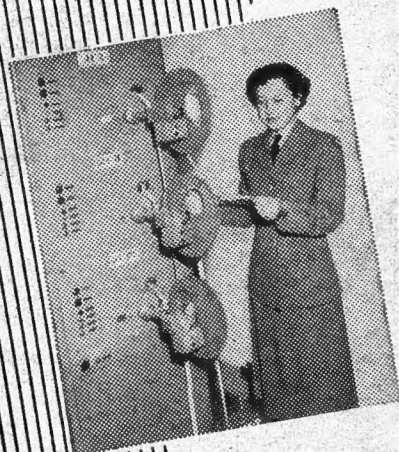
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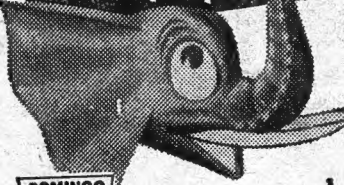
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Brandon Results

STAFF members of the Experimental Farm at Brandon have recently prepared for distribution a short mimeographed booklet which presents in summary form results of the main experiments conducted in 1953.

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The section devoted to Field Husbandry, features costs of operating tractors and power-driven machines, fertilizer experiments and weed control. Animal Husbandry contributes a paragraph reporting the feedlot performance of Shorthorn calves, including bulls, steers and heifers. Nutrition studies, feed costs in egg production and the results of chick feeding tests highlight the brief summary on Poultry Keeping.

The Farm and Ranch Review

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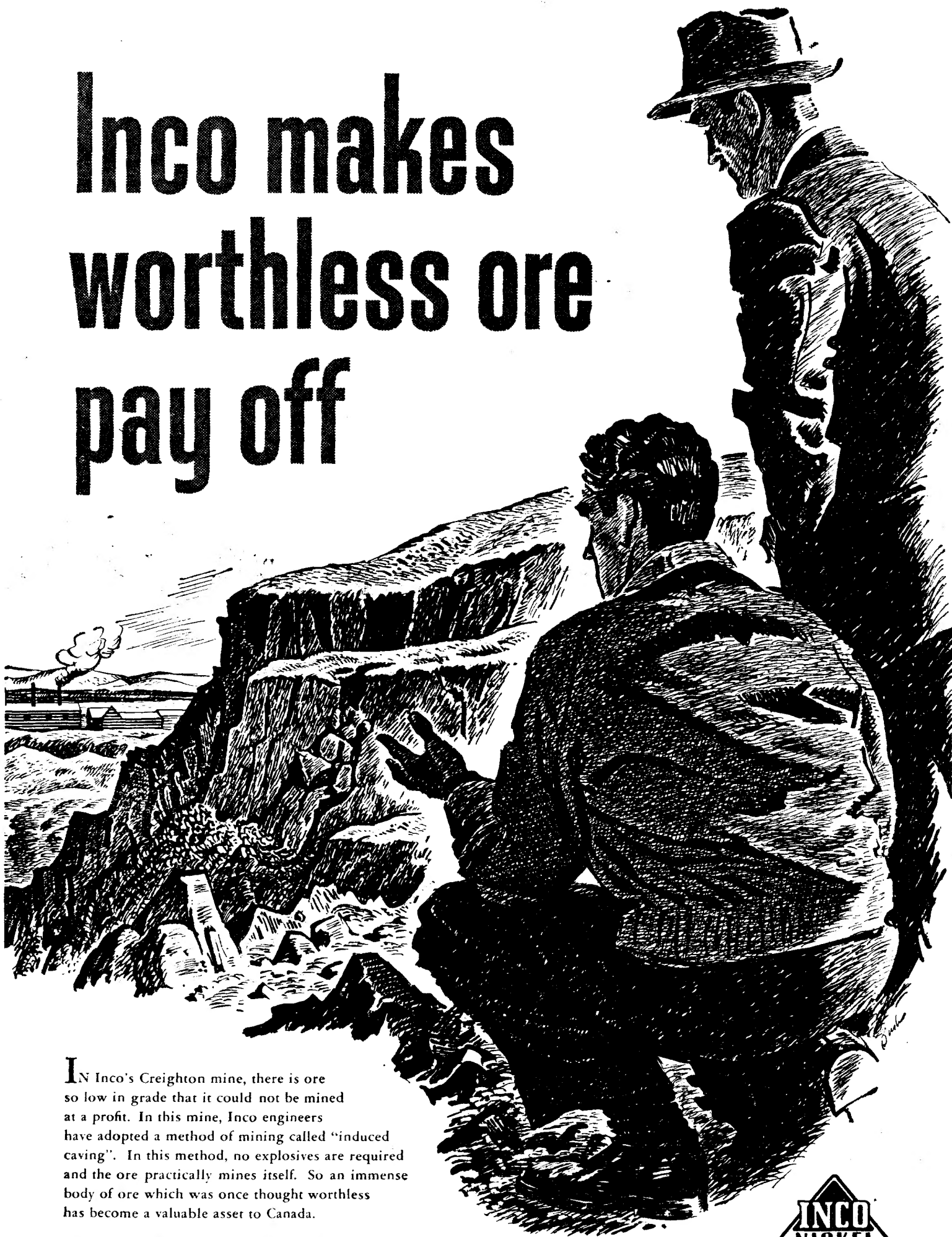
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The Farm and Ranch

Editorial Page...

A Saskatchewan luxury— the high cost of Joe Phelps

CURIOS, is it not, how ideas keep going around in circles? Once every 20 years or so, the notion gets into circulation that there is a community of interest between the prairie farmers and union labor. So, it is argued that farm organizations and labor organizations should get together. But as Henry Wise Wood used to say, the trouble was that when they got together they found that the only thing they had in common was the farmers' assets. When they started dividing them up the farmers naturally went short in the deal.

The last time the "community of interest" illusion was taken seriously was back in the early 1930's when the C.C.F. was formed. But it quickly demonstrated that in the industrial east the trades unions dominated the party, and even in agricultural Saskatchewan the unions always kept the farmers in their place. Now the idea had broken out again in a new place, in the Farmers' Unions.

With Joe Phelps calling the plays for the Farmers' Unions, an outfit called the Canadian Farmer-Labor Economic Council has been set up. Its composed of Mr. Phelps (naturally) and Percy Bengough and A. R. Mosher, heads of the two central labor organizations in Canada. After the meeting in Ottawa setting up the organization, the following statement was issued:

"The meeting felt that there were definite signs of a recession and that rather than adopt a pessimistic viewpoint the two major economic groups in the Canadian economy should co-ordinate their efforts and make a start at mapping out an objective program, for the ultimate submission to the federal government, to prevent this unsound economic position from spreading".

Don't worry if you can't find much meaning in that. It gets worse the oftener you read it, which definitely identifies it as having been drafted by Mr. Phelps.

Mr. Phelps' interest in playing footsie with the trades union leaders is understandable. His spiritual home is with the unions. He gets all his inspiration from them. And whenever the interests of the farmers collide with those of the trade unions, Mr. Phelps can always be counted on to see the justice of the union case.

What Mr. Phelps is doing leading a Farmers' Union puzzles us almost as much as the seeming willingness of Saskatchewan farmers to follow his meandering and aimless leadership.

But all this is beside the point. We wondered if the farmers of the West noticed this coincidence — the announcement of Mr. Phelps' success in getting into bed with the unions came at the same time as the announcement by the Wheat Board that it was dropping the price of wheat in the east by 7 cents a bushel. Why this cut in the

farmers' income at this time, a cut that can cost us \$15 or \$20,000,000 in the aggregate?

The answer is: Because the rail freight costs of moving wheat from the Georgian Bay ports to the Atlantic and lower St. Lawrence ports had gone up to a point where they were 7 cents out of line with Pacific coast costs. And why had freight rates risen? Because the wages on the railways have gone up steadily, and each increase in wages has caused an increase in freight rates. So something had to be done to get the price of wheat back into line. Could it be restored by cutting wages and reducing freight rates? Don't be silly. It was fixed by the traditional method of dipping into the farmers' pocket and dividing up his assets. In the process it means that we'll get that much less for all the balance of our crop that is still to be marketed.

Whenever the interests of labor and farmers clash, it is always the farmers' assets that get cut up. When do the packinghouse workers choose their time to strike? In the falls when it will hit the farmers hardest. When did the railway workers choose to stage their strike? In the midst of the grain harvest. When did the grain elevator workers, at the coast, choose to strike? When it would prove most costly to the farmers.

Where to buy your Easter Seals

THIS is a special editorial for our Alberta readers. It's about Easter Seals for Crippled Children. Regardless of where you live in Alberta we hope that you'll use Easter Seals on your mail before Easter. That's one point. Even more important is this: We hope that you'll buy your seals from the Children's Hospital Aid Society, Calgary.

Local patriotism has nothing to do with all this. We think the Hospital Aid Society is a wonderful organization. It has no expensive hired help, no executive secretaries, no paid officials. The women pay all the costs of the Easter Seal campaign out of their own funds, and all the donations for Easter Seals go to the crippled children's work.

They were the first people in Canada to start sending out Easter Seals. In recent years some professional charity groups have tried to push the Calgary women out of this field. They have refused to be pushed around so we hope that when you buy your Easter Seals you'll get them from the organization where all your contribution goes to charity, and none of it goes for salaries or expenses of the fund raisers.

That is bad enough, in all conscience. But it is only the first verse. Why does the farmer feel the economic pinch today? For the very simple reason that wages have gone so high that they have pushed the price of everything the farmer buys beyond all reason.

Only the other day, one of the leaders of the unions that control the farm equipment factories in the east was complaining because the farmers weren't buying machinery. He vaguely wanted the government to do something. But he had helped push farm machinery wages to all-time peaks which increased the price of all the equipment the farmers need. Did he suggest maybe that if his union and the railway unions cut wages a little, and got the prices down, that the farmers might be able to buy more machinery. In a pig's eye he did!

In these labor-farmer conferences that Mr. Phelps has set up, will he suggest to the unions that they should stop forcing prices up by pushing wages up. He will not, for there is one thing we can always be sure of about Joe Phelps. He's always very conscious of the justice of the other fellow's case. He can always see how Labor has a good argument on its side. He can always make allowances for organized labor, and in the process try to cast other older farmer organizations as the villains in the piece.

We can understand Mr. Phelps' current concern to get some sort of a system functioning in Saskatchewan so that dues will flow automatically to his union. If he doesn't get something like that the dues will stop flowing, for the farmers of Saskatchewan are unlikely to go on paying the shot to keep Mr. Phelps in the labor leader business indefinitely.

★

How about some tax cuts?

IF, as all the experts say, the signs point to a levelling out of our economy, we see no evidence of it in the behavior of our various governments. Most, if not all of them, will spend more money this year than they did last, and the totals will all be at near record heights.

What this means of course is that they will all have more money to spend which in turn means that they will be taking more out of our incomes in taxes. The Federal Government is a perfect example of something we don't like. For the first time in many years, our direct military expenditures will show a decline this year. But this saving will be more than made up by increased spending elsewhere.

When things are good, most of us spend our money rather freely. But when things tighten up a little, we start to become a trifle more careful. But that doesn't seem to apply to governments. All the various departments are going merrily along, raising their sights in complete disregard of the ability of the people to sustain the present tax load.

It is argued, for example, that one reason why costs of government have risen is because the wages of the civil service have been increased several times. But one way in which economy can be achieved is surely in greater insistence upon the providing of a day's work in return for a day's pay.

(Continued on page 6)

THE EDUCATIONAL SCANDAL—3

Why should we work when we don't have to?

IT is almost 200 years since Voltaire, the great French philosopher, set forth his belief that "the ultimate result of shielding men from the effects of folly is to fill the world with fools."

Now, two hundred years later and in the middle of Western Canada, we can see Voltaire's theory being put to a test. Or, more precisely, we soon shall be able to tell how much validity there is in his theory because, under the direction of the modernist theorists, our whole educational system has been transformed into an institution whose main function is to shield our pupils from the effects of folly.

The publication of Dr. Hilda Neatby's book, "So Little for the Mind", has caused a general probing into our educational system. It has forced the geniuses who are responsible for the system to come to its defense. Their defensive efforts have only served to emphasize that the mess is far worse than any of us previously suspected.

From one of these aforementioned geniuses we learn how the primary schools function. Each class is divided into three groups according to the score the pupils make on intelligence tests. The groups would be an extra bright minority, a fair average majority and a somewhat dull minority. The whole aim of the primary school has become one of preventing the bottom minority from discovering it is not as bright as the rest. So the speed at which the class moves through its schedule is adjusted so that the slowest witted may be able to keep up with the rest.

But what about the bright minority? Alas, it gets no consideration. It must reduce its progress so that the dullest group can keep up with it. As far as the brighter pupils are concerned, nothing is encountered in the class room that provides them

with any challenge. They are never permitted to operate in high gear.

We have become enmired, here, in a morass of psychological balderdash that only the fuzzier minded Bachelors of Education could take seriously. It is the natural result of myopic concern with socialist equalitarian nonsense. It is a truly fantastic effort to overcome one of nature's shortcomings. Nature utterly disbelieves in equality, and goes to great pains to prevent members of species from being born equal.

There is sense in nature's rule of inequality. It makes for vigorous growth. In every inequality there is usually to be found a compensation which will enable the less favored to survive in the struggle with the more favored. There is one way in which a natural disadvantage in intelligence may be overcome — that is by harder work.

This was once the universal rule in our schools, that the duller pupils had to work harder than the brighter pupils. And this was good because the extra effort from below forced the leading pupils to work harder to stay at the top. And the habit of hard work that was forceably acquired in the primary grades often enabled pupils, who were not as bright as their fellows, to walk off with medals and prizes.

Side by side, with the de-emphasis of hard work as a compensation for lack of keen intellects, has gone the removal of penalties for failure. It is no longer necessary for pupils to work hard in order to pass their examines and move into a new grade. In fact, the whole business of examinations have been de-emphasized to a point where they have largely lost their meaning. Why? Because in the big city schools pupils are now promoted automatically without regard to whether they have learned enough to justify promotion or not. Pupils once studied

penditures so that the confidence of the Canadian people might be restored through generous reductions in taxes.

We refuse to subscribe to the idea that governments can really build up a country. This country was built by courageous and energetic people plowing back their profits into enterprise. But with taxation maintained at a confiscatory level, this process has been rudely discouraged. Well, its time we got back to it. We don't think that the construction of fancy public buildings is any substitute for the construction of factories, warehouses and industrial plants by private investors. It is this type of construction that ought to be encouraged.

Everybody is concerned because of the way that farm income has been going down while prices for the things farmers buy continue to rise. One way in which the farmers would benefit would be in reducing income taxes, and in removing the sales tax from many of the items a farmer has to buy.

In plain truth, we don't know when there has been a year since the war when the arguments for reduced government spending and a substantial reduction in taxes were as cogent as they are this year.

because they knew that if they didn't work they would not pass, and not passing was a disgrace to a healthy child.

Nowadays, there is little point in the pupils putting out any extra effort when they know that they will pass without doing so. So from emphasis on bringing out the best in our children, we have emphasis on laziness, on making no effort because none is required.

Now the excuse for all this is that the schools now teach "the whole child"; that they are molding attitudes which will enable the young people to take an active and intelligence part in community affairs. But what they overlook is that we still live in a competitive economy. Our pupils emerge into a world where employers don't give a hoot about social attitudes. They want somebody who can do the job the way they want it done. And it gradually dawns on the young people that they've been living in a never-never land with their educators.

We have shielded them completely from not only the effects of folly but from the reality of life. The way in which character, personality and ability are developed is by the exertion of pressure. How we react to pressure is a measure of the kind of people we are. Some people can take all kinds of adversity and come up for more. Others will cave in with the least measureable discouragement.

What our schools should be doing is the reverse of what they are doing. They should be making the curriculum a challenge to our boys and girls, the bright, the average and the dull. We should devise courses of study that will require a maximum effort and provide adequate rewards for the putting out of that effort. The purpose of our schools is to provide our children with a foundation on which an education may be built. The purpose is not merely to provide them with shelter from the elements while they coast through puerile courses of studies.

Will the pupils like that? Of course they will! Young Canadians are instinctive competitors. No matter what game they play, they want to choose up sides and compete with each other. And which of the games are most popular, the easiest to learn or the hardest to learn? Is there any game harder to learn than hockey, or one more universally popular with our young people? Another game that takes a lot of learning is skiing, still another is figure skating. The fact that months must be spent in painful practice before skills are acquired doesn't bother the youngsters in the least. Why should they be bothered by a school curriculum that is a challenge to them?

Finally, there is the fact that learning how to fail, learning from mistakes, has been largely removed from the public schools. Great effort is made to keep the pupils from any feeling of failure. But we learn more from failing than we ever do from succeeding. In fact, success that comes too easily, can do irreparable harm. But how can there be any sense of succeeding if we are not conscious of the chance of failure? There is no such thing as **pure success**, or **pure failure** for each must be considered in its relation to the other.

Once our geniuses discover that simple truth we will have some hope of changing the system. But we can think of a simpler and quicker solution — Let's start firing the bureaucrats who have foisted this mess on us in the first place.

(Continued from page 5)

Our civil service contains many able, conscientious and hard-working people. It also contains many who take the maximum advantage of every civil service regulation to get out of earning their pay. By all means let us pay the worthy people what they are worth. But let us at the same time start pruning the deadwood out of government departments so that some relief can be passed along to the taxpayers.

Then there is the argument that a big chunk of the increased cost of federal expenditures is accounted for by fixed charges. There is a big increase in the charges for debt because of the rising interest rate. But this is, after all, the result of deliberate Government policy. It decided long ago that interest rates were too low and should be raised. Having carried through that policy it cannot plead that it is "forced" to find more money for interest payments.

It does seem to us that one of these times the Canadian people should be entitled to some rather whopping tax cuts to make up for the long years of high taxes we have been through. And it would seem logical for the Government, if the economy is levelling off, to drastically curtail its ex-

Some minor gains from the Berlin meeting

By BEN MALKIN

THE Big Four meeting in Berlin last month didn't resolve the two specific issues on which its discussions centered. It didn't agree on a German or Austrian peace treaty. But the meeting was evidently far from a failure. On the contrary, it seems to have been the most fruitful since the end of the war, if for no other reason than that it didn't break up with the feeling that it was no use for the two sides to try to get together again to talk about a peace settlement.

Two specific accomplishments arose from the meeting. First, the two sides apparently sounded each other out quite thoroughly during the secret sessions that were held in between the public meetings. From this sounding out, they found how far each could go without getting into trouble. As Mr. Dulles, the United States secretary of state, put it, neither side should now start a war inadvertently. This is extremely important, because neither side has hitherto known, except through a chancy process of trial and error, and of taking calculated risks, how far it could go without provoking the other to retaliate. That's how the Korean war started.

The second accomplishment was the agreement to meet at Geneva in April, along with Communist China and a number of other countries, to discuss a Korean peace. Until now, the United States has wanted to discuss Korean unification only with countries that took part in the Korean war. Russia could take part, but as a belligerent on China's side. The discussion would stick to unification alone.

This meant that nothing would be offered to China, such as an end to the trade embargo, or representation in the United Nations, in return for pulling out of Korea, because nothing would be talked about except China's pulling out. But if China didn't pull out when the United Nations was shooting at her, what possibility is there that she'll pull out merely because the U.S., or anyone else, says she should? None whatever. China has to be offered something that she wants badly enough to make her agree to Korean unification, and since anything offered her would involve other countries — Indo-China, maybe Japan, possibly India — a conference on Korea would have to be much wider than the U.S. at first wanted.

U.S. Concession

The agreement to hold such a conference represents a real concession by the U.S., especially in view of the public opinion south of the border today, which tends to think of every bargain struck with the Communists as

appeasement. Yet it isn't appeasement when, in return for giving the Communists something, the West gets something concrete in return that it wants very badly. It's only appeasement when the Communists are given something in return for mere promises to behave. If the Chinese and Russians also come to the Geneva conference in a mood to compromise, a settlement might be reached that could relax tensions and, not least, allow Western countries to ease up on defence budgets and taxes.

One of the things China could concede is to stop giving help to the Communists in Indo-China, thus ending the war there. China might also agree to pull right out of Korea. In return, Peiping could be allowed into the U.N., and maybe the United States could give China diplomatic recognition.

This would mean that the U.S. would likely have to withdraw support from Chiang Kai-shek, the Chinese Nationalist leader on Formosa, and this is something the Communists want very badly. Another big concession to China would be to allow the re-opening of trade, in a really big way, with Japan and other countries. It is only by bargaining of this kind that a settlement can be achieved. Certainly, it was by compromise that an armistice was achieved in Korea, and compromise hasn't hurt anyone on either side.

U. S. Livestock trend

HOG marketings in the United States appear to be temporarily on the down trend while cattle marketings are increasing, according to J. R. Ives, associate director of marketing, American Meat Institute. Inspected hog slaughterings during the 1952-53 marketing year amounted to 57 million head, down 9 per cent from the previous year and a further decline of about 9 per cent to 52 million is expected in the present year. However, next spring's pig crop will likely be from 8 to 10 per cent larger with the result that larger marketings are expected next autumn.

Cattle slaughterings during the first 8 months of 1953 were about one-third larger than last year, but even this heavy rate of slaughter may not halt some further build-up in cattle numbers from the 93.7 million head reported at the beginning of 1953. Slaughterings during 1953 may total about 35½ million head, the largest since 1947, and next year they are expected to increase by another two million.

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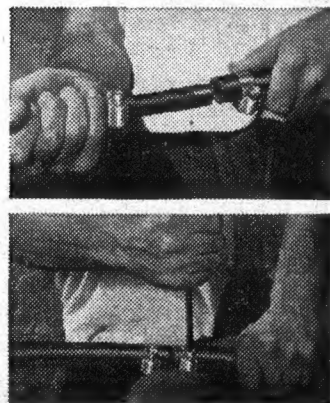


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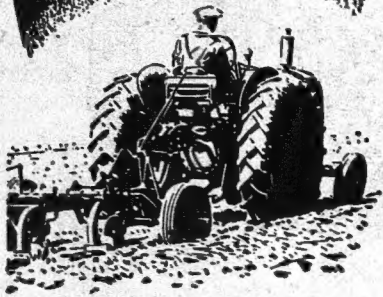
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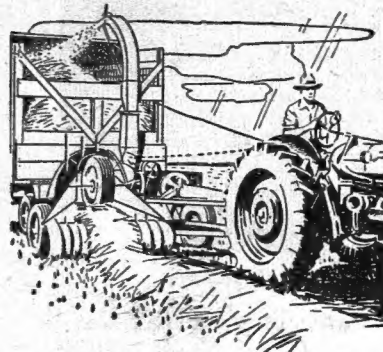
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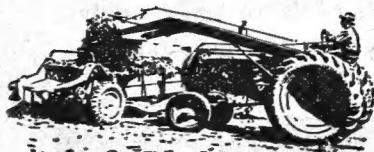
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Is Science Service useful or just an expensive frill?

This is the first of four articles by outstanding agricultural scientist on the function of Science Service in relation to the farmers on the land

By JOSEPH PAUL

IT is interesting to glance back at the Revised Statutes of Canada, 1886, and note the duties assigned to the officers of the Experimental Farm Service, which was created by an Act passed at that time.

They were to: "(a) Conduct researches and verify experiments designed to test the relative value for all purposes, of different breeds of stock, and their adaptability to the varying climatic or other conditions which prevail in the several provinces and in the North West Territories." Other duties listed under clauses from (b) to (i), dealt with the following items: the economic questions involved in the production of butter and cheese; hardiness and adaptability of varieties of field and garden crops; analysis and testing of fertilizers and feeds; the planting of trees for timber and shelter; the ravages of plant diseases and destructive insects; diseases of domestic animals; and the vitality and purity of agricultural seeds."

Then came the final clause: "(j) Conduct any other experiments and researches bearing upon the agricultural industry of Canada which are approved by the Minister."

How well or how poorly "the will of the people" has been

done with reference to clause (a) is one story; but it is the purpose of these articles to survey the mass of research work which has developed under the broad and open terms of clause (j).

A report entitled "Fifty Years of Progress on Dominion Experimental Farms", was distributed in 1936. It contained this very significant remark: "In the past the work was largely practical; but it is changing gradually to systematic research". Truer words were never written. In fact the emphasis on "systematic research" became so great that a reorganization was undertaken in 1938 with "Science Service" becoming one of the new parts of the Department of Agriculture, separated from its parent, the Experimental Farms Service, by a process which might best be called an administrative Caesarian section.

The infant Science Service was born in comparative poverty. The whole Department of Agriculture had to get by on a little over a million dollars as recently as 1908, and was spending a mere \$9 million in 1937 with the Experimental Farms Service getting a 2-million-dollar bite. But Science Service has done well. It was

a million-dollar show by 1939 with the Experimental Farms still spending over \$2 million; and by 1951, Science Service had outstripped its parent with a net spending power of over \$7 million. In 1952, they ran neck and neck with net expenditures of a little more than \$7 million each.

All this development has taken place to satisfy the hue and cry for a "more adequate programme of research in agriculture." After dinner speakers, convention speakers, and soap-box orators have all joined the chorus. Some demanded "fundamental" research, some asked for "pure" research, and others begged for "systematic" research.

It is safe to say that not one speaker in a hundred could outline a programme of work that should be carried out if more money was spent on the fundamental, pure, or systematic research they were clamoring for. In fact the confusion caused by these vague expressions became rather embarrassing, and it was necessary to dig up that nasty word "practical" again in self defense.

In one of the annual reports we read that, "The work of Science Service is directed toward the solution of practical problems of agriculture through scientific investigation." Other statements have appeared which help to describe the work more fully. For instance we note: "The Service is responsible for the maintenance and development of the National Collection of Insects, The Dominion Arboretum and an economic herbarium."

Now these are terms of reference under which a staff of capable workers (even a small staff), could accomplish great things. And it should be stated that Science Service has accomplished a lot by attacking the "practical problems of agriculture through scientific investigation." Science Service has been more aggressive and in many ways more effective in its work than its huge and slumbering parent, the Experimental Farms Service.

But such comparisons are of little value. Anyone who has taken a critical look at big government services will realize the advantage of being a young service. Time will tell how much of the effectiveness of Science Service is due to inherent efficiency, and how much is due to its temporary lack of the burden of "top brass", or headquarters officialdom that accumulates through time. More



It pays to market hogs at correct weights

DURING last winter the Animal Science Department of the University of Alberta ran an experiment to study the variations in feed efficiency and carcass quality when hogs are marketed at various weights. The rather interesting results of this study were reported by J. P. Bowland at the 1953 Alberta Feeders' Day. It was shown conclusively that pigs marketed close to the 200-lb. mark consumed considerably less feed per 100 lbs. of gain than those fed to 225 lbs. Moreover carcasses marketed at the lighter weight showed appreciably less fat on shoulder and loin.

These findings should help to dispel the impression still held in some quarters that the cheapest gains are secured toward the end of the fattening period. The data presented in table 1 show that this is distinctly not the case.

Table 1: Summary of Rate of Gain, Feed Consumption and Feed Efficiency by Various Weight Ranges

Weight Range lb.	Ave. Daily Gain lb.	Ave. Daily Feed lb.	Feed per 100 lbs. Gain lb.
50-75	1.12	4.04	361
75-100	1.35	5.35	396
110-150	1.48	6.49	439
150-185	1.47	6.56	446
185-205	1.51	6.80	450
205-225	1.58	7.50	475

NOTE: The 24 pigs in this test were marketed in three lots—8 at 175-185 lbs., 8 at 200-210 lbs. and 8 at 220-230 lbs. Thus the last two weight ranges include only 16 and 8 pigs respectively.

While pigs gain faster as they increase in weight and as their capacity for feed increases, the feed taken to put on each additional pound of gain also goes up. This is because the heavier

a pig gets, the greater is the proportion of its daily ration which is required for bodily maintenance. Also as a pig gets older, a higher proportion of its weight increase is in the form of fat, and it takes more feed to lay on a pound of fat than a pound of lean meat because the caloric content of fat is higher.

The Alberta experiment shows that the hogs marketed in the 200 to 210-lb. weight range gave a higher net return over feed costs than those marketed at either 175-185 lbs. or at 220-230 lbs. There was not much difference in the case of the higher weight group, but those marketed at over 220 lbs. netted \$1.39 less per 100 lbs. live weight over feed costs than those sold in the desirable 200-210-lb. range.

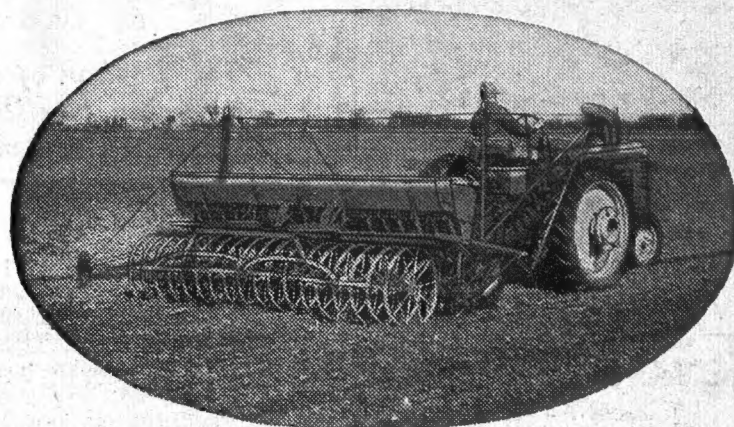
It would appear, therefore, that the feeder who continues to feed hogs past 210 lbs. not only runs the risk of obtaining lower grades but also stands to realize a lower net return on the feed taken to lay on this additional weight and fat. It would be much sounder economy to produce for market nine hogs averaging 200 lbs. than to sell only eight averaging 225 lbs., since the latter would consume more total feed and net a lower return. In view of the rather disturbing trend of hog quality, the facts brought out by this experiment certainly show that it would pay many farmers to give closer attention to the weight factor in their hog marketing programme.

Advises Growing Durum Wheat

H. McKENZIE, spring wheat investigator at the Lethbridge experimental station, suggests that 100,000 acres could be seeded to Durum wheat in southern Alberta and western Saskatchewan next spring and that the crop from this additional acreage should readily find a market. The new race of stem rust, 15-B, has caused losses to Durum growers in Manitoba and eastern Saskatchewan and because there is no 15-B resistant Durum variety it is anticipated that the Durum acreage will be reduced next year in these areas.

Stewart is a recommended variety of Durum which yields slightly less than Thatcher and about equal to Rescue. It is about four or five days later maturing than Thatcher. Another suitable variety is Minidum. Both of these are of excellent quality for macaroni making and are eligible for the grade of No. 1 C.W. Amber Durum. Pelissier and Golden Ball are of inferior macaroni quality and consequently are not eligible for top grades. All Durum wheats possess some sawfly resistance.

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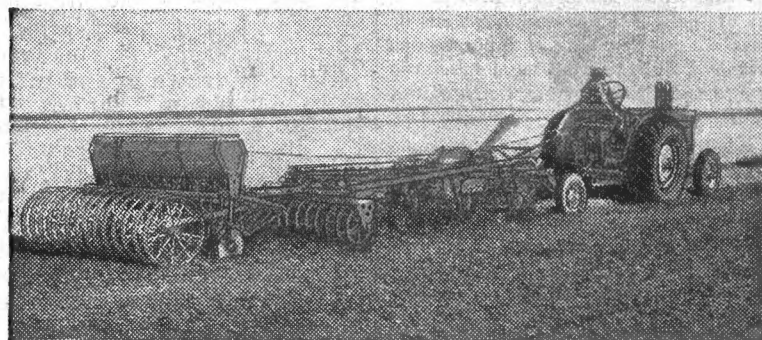


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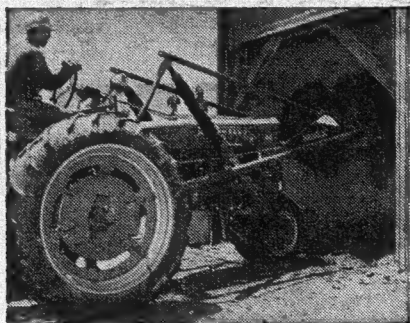


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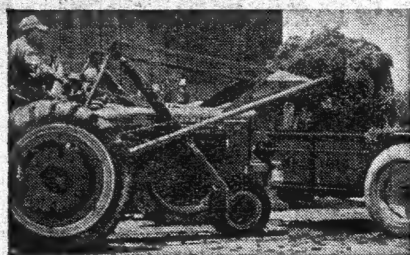
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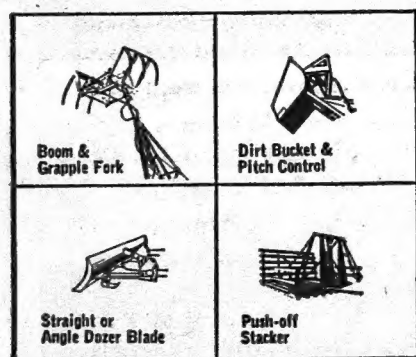


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Can we feed our soil and get rid of rust and bugs?

By LEONARD H. COOPER

The author of this article tells of some amazing results in raising disease free flowers and poses some questions for our researchers

AFTER the first Great War, when explosive plants were changed over to fertilizer manufacture, great stress was laid on the value of chemical fertilizers. This was particularly the case south of the border, but fortunately our Canadian manufacturers did not adopt nearly such an aggressive sales attitude. They depended on the results obtained from hundreds of tests on growing crops to sell their product.

There was one angle of soil science which the chemical manufacturers overlooked. The effect of organic matter on the structure of soil. Organic matter means abundant soil bacteria and in their life's processes they form a kind of gum which clump the clay particles together. This clumping means better soil aeration which in turn means better passage of water through the soil, building a reserve in the subsoil owing to less run-off during heavy rains. Rapid percolation of water through soil means that oxygen is drawn in and without oxygen plants cannot live. These factors lead to better plant growth.

Soil chemists went what I call "phosphorus crazy". That is, gave far too much thought to the use of high phosphatic chemicals and seemed to ignore the value of nitrogen and potash to plant life. In the last year or so manufacturers of mixed chemical fertilizers have increased the nitrogen content of their products. British soil chemists never did neglect nitrogen for many crops. In Alberta, ammonium nitrate (nitraprills) has been found to give better wheat yields where heavy stubble is ploughed under.

Indore Process

Then we had the people who went to the other extreme and said that only organic compounds were necessary to grow crops. The so-called Indore Process of making compost from vegetable waste was really responsible for this attitude. The Indore Process originated in India. The compost people went so far as to state that many of the ills of human beings could be traced to the use of chemicals. What they forgot was that in animal manure and composted vegetable matter there was just the same chemicals as in chemical fertilizer. We must not forget either that the addition of manure to land increases the bacteria in the soil

on which we depend for the breaking down of chemicals to plant food easily available to the plant.

If a soil test is done on freshly broken virgin sod the figures are roughly 1 to 2 parts per million nitrates, $\frac{1}{2}$ to $\frac{3}{4}$ parts phosphorus, and 15 to 20 parts potash. If this soil is ploughed, chopped and pulled into piles for a year and another soil test is done the figures are nitrates 8 parts per million, phosphorus $\frac{3}{4}$ and potash 15. This test was done quite recently. In fact, during the time this article was being written.

This explains why the farmer of 40 years ago always said he got better crops the year after he broke the sod. The soil bacteria used all their energies breaking down roots and grass to plant food and were stealing the small amount of nitrate in the soil to complete their life's processes and the sown plants suffered in growth and yield. But had he been able to get ammonium nitrate to use on his freshly broken sod he would have had good growth and

yields because the chemical would have fed his plants and the soil bacteria using up the nitrates to rot down the grass would not be stealing enough to affect the growth of the plant. Of course he should have added also a high phosphate chemical to balance up his soil. He might then have produced a world champion wheat had moisture and weather condition been ideal.

Now we combine organic matter and chemicals to produce the best growth. Research has shown that the addition of organic matter per acre can be reduced if chemicals are used with it.

It was in 1842 that Sir Bernard L. Lawes produced superphosphate commercially, being the first in the world to do it.

Animal manures unless thoroughly rotted contain too much nitrates in relation to phosphates and potash. Grain crops and also many varieties of flowers and vegetables will not produce their best quality and yield as they should without additional phosphate. I know of no better vegetable than the turnip to prove it.

Turnips Prove It

The farm wife loves her garden, so after her turnips are growing nicely, and, keep it a secret from her, feed some of her turnips at the end of a row about $\frac{1}{2}$ teaspoon of superphosphate per plant. At the end of the season she will wonder why those you fed are 10 pounds

Mt. Robson

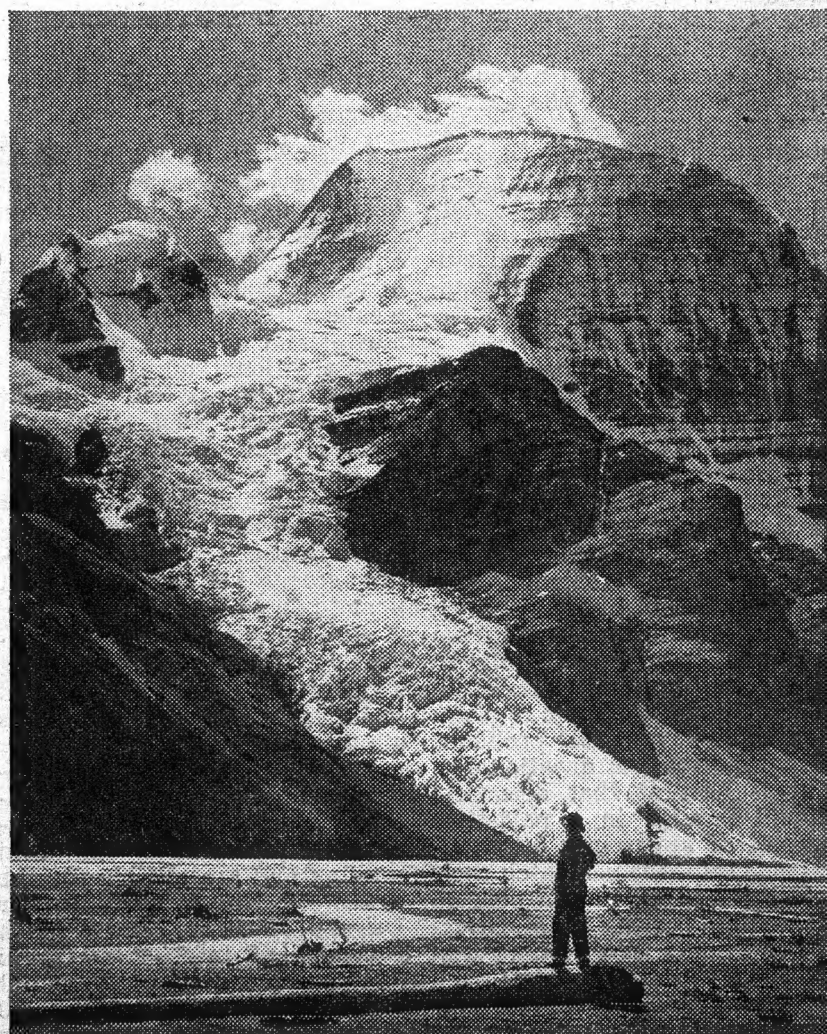


Photo by Richard Harrington.

each and the others so much smaller.

It was Sir Bernard Lawes who used turnips to prove to the world that additional phosphate added to manure was essential for the best plant growth.

Tractors and motor cars do not produce as a waste product plant food, as our horses, cattle, sheep and hogs do, so as years go by we shall have to rely more on green manuring, ploughing under chopped straw or if near a sawmill, sawdust to maintain the organic matter in the soil. With these we shall have to use ammonium nitrate or ammonium sulphate plus additional phosphate and very probably potash.

Between the years 1867-1875 the celebrated French chemist, Ville, in various lectures said, "When chemical manures are used in combination with stable manure, we must look to the latter as a fund of richness possessed by the soil and confine ourselves to the use of chemical manures which have substances best suited to the particular crop grown during the year.

In 1892, the late A. B. Griffiths, Ph.D., F.R.S., wrote: "More studious application to details—a thorough knowledge of the requirements of each crop, the composition of all soils on a farm, the manures to add (and when and in what proportions to use them) in each case will be the great means of raising the farmer and his vocation to the position he should occupy."

This brings me to another point. A while ago I read in an English paper that in South Australia a large tract of land would never produce sufficient pasture for sheep raising. Climatic conditions, rainfall, etc., should have grown good grass and plentiful. (Sod-producing grass is known to supply its own organic matter.) After years of research soil chemists found the soil was lacking in copper and zinc. Now every seven years, 7 pounds of copper sulphate and 7 pounds of zinc sulphate are applied per acre. The result is plentiful and good pasture for sheep raising.

I think we are not paying sufficient attention to the value of the lesser known elements in our soils. For years I have done considerable research on greenhouse soils and the so-called trace elements which are copper, zinc, boron, molybdenum, manganese and iron. The last should not be classed as a trace element as it can be present in fair amounts before any damage can be caused to plant life. Another trace element which is never mentioned is vanadium. Years ago I was convinced that this element had a direct bearing on the production of high-class carnations.

Iron and copper have received a lot of my attention under glass and I have proved after considerable research that if the

concentration of available iron in the soil is raised to a certain point, rust on carnations and black spot on roses, both fungoid diseases are eliminated. Year ago it was standard practice in England to use 56 pounds of iron sulphate per acre to control their strain of rust on wheat. I have often wondered when I see another strain of rust has appeared whether it would not be more time saving to check the soils for a lack of trace elements than start breeding a strain of wheat resistant to the new rust.

Working with iron sulphate on carnations, I had an experimental patch of wheat which had been fed with iron sulphate. I sent to Saskatchewan for a wheat plant badly infested with rust. I tried to inoculate my wheat with the rust but was unsuccessful. Other work had to be done and I never continued my experiments. But I still think that possibly some strains of wheat rust might be controlled by sufficient trace elements in the soil, if this was commercially economical. Trace elements are now obtainable in a form easily applied to land.

I understand that under continued cultivation our soils are lacking in some of the trace elements and possibly some of the diseases that are troubling us can be traced to this lack. Copper is still one of our best fungicides. Some of my research at present is to ascertain just how much copper there can be in a soil before a toxic condition to plant life is reached. Carnations in the past few years have been troubled with various new fungoid diseases and my hope is to fill them with copper from the soil so that fungus cannot get started. I am now filling carnations and chrysanthemums with a poison that kills greenfly, red spider and thrips as soon as they feed on the plants, therefore we never have to spray for these pests.

In a news report, I notice that the cerealist, Miss Alice Wall, at the Lethbridge Experimenta Farm, has noted that sawflies will lay their eggs in oat stems. The eggs hatch but the grubs do not reach maturity. What a challenge this is to chemists and plant men to find the reason. What does the oat extract from the soil which kills the sawfly grub, which evidently the wheat plant is not able to do. If we could inoculate the soil against the sawfly it would be eventually eliminated as a wheat pest. Such a procedure would put millions more dollars in farmers' pockets. And the research worker would be worthy of a monument to his memory.

British traders have been dickering with Russia for wheat but it seems that the price, quality and conditions of sale have not been acceptable. The British want to buy on sample while the Russians want to sell on a certificate final basis. It is reported that the Russians asked around \$2.15 a bushel which the British considered too high.

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Sun Life Ups Policyholder Dividends to \$24½ Million

Continues to sell more life insurance than any other Canadian company—\$576 million new business written in '53

A higher dividend scale which for the fifth consecutive year will again reduce the cost of life insurance for the holders of two million Sun Life of Canada policies, is announced by George W. Bourke, President, in his Annual Review of the Company's business for 1953. Dividends to policyholders during 1954 will amount to \$24½ million, 11% more than in 1953 and an increase of more than 50% over the last five years. Most policy-holders carrying participating plans with the Company will benefit by this increase, with the largest payments being distributed in respect of policies longest in force. New life insurance issued during the year amounted to \$576,946,000, an increase of \$31 million over 1952, and the largest amount for the year of any Canadian life company. New Group insurance included in the above figure amounts to \$170 million, an increase of more than \$5 million over the previous year. This rising volume of business was spread over world-wide territory in the nearly 30 countries covered by Sun Life service.

In his survey of the figures for the year, Mr. Bourke comments on the manner in which life insurance meets the responsibilities of its purpose. The Sun Life of Canada, he said, has paid \$2,729,000,000 in benefits since the first policy was issued in 1871, and during 1953 no less than half a million dollars was paid out by the Company each working day. Total amount paid during the twelve month period was \$125,057,000.

GROUP BUSINESS UP 17%

New annuity contracts during the year included individual annuities and group pensions guaranteeing payments of more than \$4 million per annum. Total annuity payments to be made by the Company either immediately or in the future, through group pension plans and individual contracts, increased to \$126 million per annum. Total Sun Life insurance in force at the end of 1953 amounted to \$5,678,000,000. Group insurance included in this figure is \$1,751,000,000, an increase of 17%. The growth of Group insurance and pension plans reflects the business and individual expansion of recent years during which time the Company, a pioneer in this form of insurance, has retained a leading position, protecting many hundreds of thousands of employees of business and industrial organizations throughout North America.

The total amount of life insurance and annuities in force in the

various countries in which the Sun Life operates is now: Canada, \$3,334,035,000 or 45% of the total; United States, \$2,628,581,000 (36%); Great Britain and other Commonwealth Countries, \$1,169,339,000 (16%); elsewhere throughout the world, \$215,015,000 (3%).

Total assets of the Company reached \$1,829,790,000 at the year end, being an increase of \$87 million during the twelve-month period. These assets, carefully invested and well diversified, are made up of: Bonds — Government, Provincial and Municipal, 28.7%; Bonds — Public Utility, Industrial, etc., 41.6%; Preferred and Common Stocks 6.0%; Mortgages 14.4%; Cash and Miscellaneous, 9.3%. The interest rate earned on the Company's funds during 1953 was 3.90% as compared with 3.84% in the previous year, an increase for the fifth consecutive year.

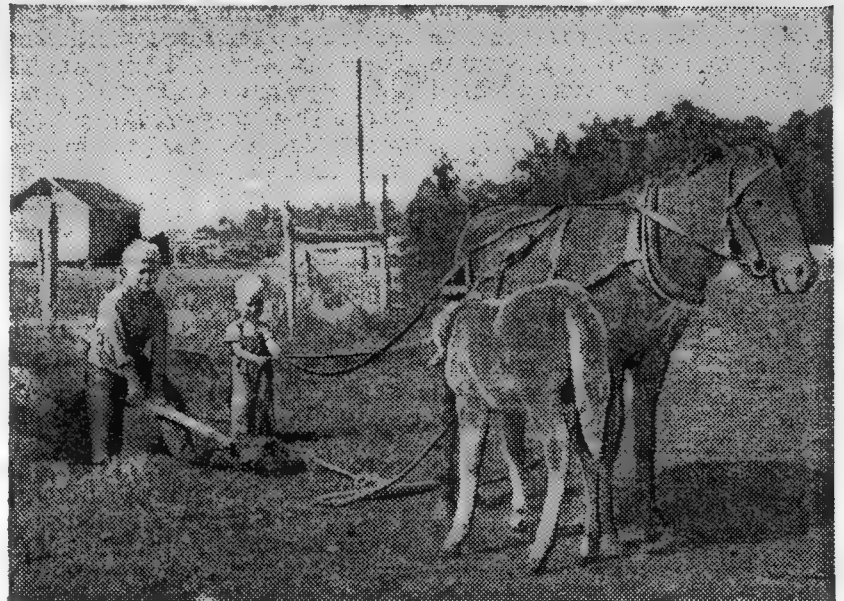
LIFE INSURANCE AIDS HOME BUILDING

During 1953, the Sun Life bond investment was increased by more than \$52 million, mainly in the industrial and public utility fields. The amount of mortgage loans expanded by almost \$30 million making a total mortgage investment of \$262,960,000. Of this amount, \$176 million is invested in 41,700 home mortgages. During the last eight years, the Sun Life has loaned \$335 million on mortgages.

Discussing the function of life insurance as reflected in the continued progress of the Sun Life, Mr. Bourke mentioned that life insurance ownership today is more widespread, and on a larger scale, than ever before. Canadians now own more than \$20 billions of life insurance, more than double the amount at the end of World War II. However, the amount per capita is not yet sufficient to give fully adequate and necessary protection, and there is still great need for the average family to own a larger amount of life insurance. "Time has proven that it is only through life insurance that the majority of individuals can meet the problems which death and old age create in loss of income", summed up Mr. Bourke. "There is no substitute for life insurance".

A copy of Sun Life's complete 1953 Annual Report to Policyholders, including the President's review of the year, is being sent to each policyholder, or may be obtained from any of the 100 branch offices of the Company throughout North America.

Half-Horse Power



Mrs. Valeria Zale, Ferley School, Ukraina, Man., sent us this nice shot of a Shetland pony being interrupted in its excavating work by a hungry offspring. Merwyn and Jimmie Harrison are the boys in the picture.

Fiber may be the villain in farm feed troubles

By GRANT MacEWEN

WHY is it that oat hulls may be a useful feed for horses and cattle and an almost useless feed for pigs? The answer is "fibre", that woody constituent that gives plants their structural strength but which resists digestion, in some species of animals more than in others.

When the analyst reports the composition of a feed in terms of water, ash, protein, fat and carbohydrate, it would be well if he were to go a step further and tell more about the last-named feed constituent. That carbohydrate fraction, usually the cheapest source of energy, may take several forms; the carbohydrate material as reported, may include sugars, starches and fibre. There are various forms of each of these.

The sugary and starchy portions of the carbohydrates in plants are more easily digested and more readily available to the animals than the plant fibre can be. A unit of fibre may gross the same total yield of energy as a corresponding unit of starch or sugar, but when the physiological costs of breaking down and digesting the fibre are deducted along with the undigested residue, the net yield of energy is very much reduced.

Generally speaking, the higher the content of fibre, the less valuable is the feed and those responsible for farm livestock would do well to think seriously about fibre differences in both concentrates and roughage feeds, especially if pigs are included in the feeding operations.

The cow and sheep, as ruminants, make the best job of digesting and utilizing fibrous feeds. They have the most up-to-date digestive machinery in their four-unit stomachs and long intestinal tracts. The horse, with a relatively simple stomach arrangement does pretty well,

also, but the pig is a rather hopeless failure. The porker doesn't utilize oat hulls much better than his human owner who knows enough about digestive limitations to remove even a lone oat hull that finds its way into his porridge.

It is one of the grossest mistakes in all livestock feeding, that because oats with about 30 per cent. of hull, are known to be one of the best grain feeds for horses, they should be one of the best for pigs. They may be one of the best grain feeds for horses, they should be one of the best for pigs. There may be times when some oats can be worked advantageously into the pig's ration along with more concentrated grains like wheat, but even then, it should be done with the realization that the pig is not going to extract much of the nutritional value from the fibrous hulls.

Commercial oat hulls, a by-product from the manufacture of rolled oats, may find an economically legitimate place in the rations of horses, cattle and sheep. The actual fibre content of that by-product is close to 30 per cent, in which respect it is very similar to ordinary hay. The oat hulls should, therefore, be seen as a potential substitute for other roughage rather than as a concentrate feed, whether fed in hay bunks or in grain troughs.

One of the most costly feeding blunders has been made by people who bought oat hulls as a pig feed. Perhaps the oat hulls had been ground to a fine state which would make them appear more like finely ground oats and make the mistake of selecting such a product for the unfortunate pigs, rather less obvious. But fine grinding will not reduce the high content of fibre and will not change the



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unsuitability of such a feed for pigs. Hungry pigs will eat it but its extensive consumption by the pig would lead, inevitably, to a case of starvation on a full stomach.

The same general reasons will explain why sifted oat chop, with hulls removed, is one of the best feeds for weanling pigs and why the pig feeder is likely to obtain a better return in increased weight from 100 pounds of barley or wheat than he can expect from 100 pounds of oats.

The above observations are not to be taken to mean that any product with more than a little fibre should necessarily be removed from the pig's ration. The leafy portions of the legume hays have considerable supplementary value for sows and other pigs during winter months, but in the light of what has been noted, it would be better for the wintering sows if they were thrown a forkful of the unground hay from which they could eat the leafy portions, low in fibre, and for which they will have an instinctive appetite, rather than that the hay be ground and the animals required to eat the coarse and fibrous stems capable of doing no good, along with the better portions.

Yes, the ruminants and horses can digest considerable of the fibre in hay, straw or oat hulls. They don't attempt to digest the fibre by means of enzymes as they do in the case of protein or fat; rather, in the absence of fibre-splitting enzymes, our cattle and horses employ bacterial organisms to work on the fibrous feeds. It takes extra time but the bacteria have time to spare and nature has provided for a slowing down of the rate at which the feed material passes through the digestive tract of a cow. Feed may pass through a pig in 48 hours, but take more than 96 hours in the case of a cow. The feed lingers in the rumen or first stomach compartment of the ruminant animal and here, amid favorable moisture and warmth, the micro-organisms that are normal residents of the bovine tract, have a continuance field day.

The result is that cattle, sheep and horses will consume rations having a fairly high level of that woody constituent of the feed and show a good return. That, however, does not mean that a very high percentage of fibre is not a handicap, even in cattle and horses. The net return in meat, milk or work will be depressed by an increase in fibre and there is another factor that has commanded increasing attention in recent years, that some forms of fibre are a greater nutritional handicap than others.

Some forms of fibre are more woody and more resistant than others to the digestive agents. As plants mature, the fibre becomes impregnated with what is called lignin, a form of fibre with super-resistance, from which even the ruminant animal

is able to derive little return. Not only is lignin indigestible, but it lowers the digestibility of other feed constituents. Lignin is being seen as the real villain in our roughage feeds.

Lignification increases with maturity of plants and therein are other morals. The immature plant fibres are the most useful in feeding. The fibre in young grass presents no digestive difficulty to grazing animals. But if the same grass is allowed to become mature, various changes occur; there is a decrease in the content of protein, fat, vitamins and the more soluble carbohydrates and an increase in both total fibre and proportion of lignin.

Thus it becomes clear that to allow hay crops to gain advanced maturity is to rob the animals of the most valuable constituents and substitute an increasing amount of something that must reduce both productive return and feeding efficiency.

Hay cut at the best time can be a most acceptable roughage feed but straw from the same cereal allowed to mature, is bound to be mediocre or inferior as a feed, possessing less of the desirable constituents and more of the unwanted kind of fibre. Exactly the same changes occur in grass or legume hay crops as they mature. Unfortunately the changes are not so obvious to the naked eye and hence, some of the biggest losses in Canadian agriculture arise as a result of poor haying methods. No feed product hides its deficiencies as successfully as hay.

If cattlemen, both beef producers and dairymen, were to realize the importance of cutting hay crops in good time, before fibre content begins to climb excessively, and recovering that hay before it deteriorates from exposure, they might be surprised how far good hay can go in supporting production, even in the absence of grains. It seems that New Zealand farmers have been the first to realize the extent to which low-fibre hays of general good quality will allow them to conserve grain and thus increase their profits.

The animals, themselves, do not make many mistakes in their choice of hay, selecting the low-fibre and low-lignin hays, even though their choice does not always agree with that of the official hay graders. It means just this, that hays are not always what they seem; quality and quantity are more or less incompatable and while color of hay is important, it is not to be taken as the final indication of quality. Fibre content must always be an important consideration in all feeds, hay in particular. And the best means of preventing costly losses due to excessive fibre in hay is to cut it reasonably early; it has been suggested that 90 per cent of Canada's hay crop is cut too late for optimum quality.



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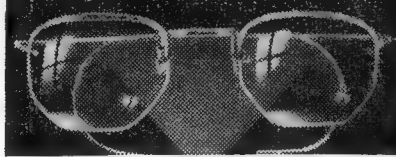


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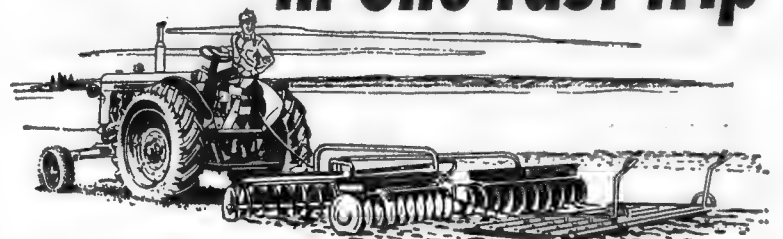
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Badger-bating isn't legal but we still badger Badgers

By KERRY WOOD

WE keep clothespins in a box attached to the house wall, right under the pulley lines that stretch out from our back porch. Marjory was hanging out clothes this morning, and just as I passed she reached into the box for a handful of pins.

"Aaaagggghhhh!" she shuddered, jerking away her hand.

"What's wrong?"

"I grabbed hold of that hairy paw you keep in cold storage out here."

So I took the badger's foot out of the clothespin box, belatedly deciding to find another keeping place for it. We'd found a car-killed badger out on a country road the previous autumn, and I'd brought home the severed foot as a curio. It was a front foot, hence was armed with long, strong claws curved in a crescent shape and specialized for digging into prairie soils. Many a westerner has marvelled at the speed of a badger's digging. In fact, an alarmed animal can dig itself out of sight in one minute's time.

Looking at the foot reminded me of the few but interesting contacts I've had with badgers. They are secretive and wary, doing most of their prowling after dark. Despite all their caution, however, the persecuted animals are no longer plentiful in the prairie provinces. Men destroy them whenever they get the chance. Ranchers don't like badger holes pocking their range lands, fearing that a saddle horse or a galloping steer

may accidentally thrust a foot down the gaping hole and break a leg. Farmers have less excuse for shooting and trapping badgers, but apparently mistrust the animals near poultry pens because badgers are related to the weasel family. And all the while, badgers work diligently for farmers by feeding on insects and mice, pocket gophers and the Richardson's Ground Squirrels we call by that "gopher" name.

Apart from the pros and cons of beneficial or harmful traits, badgers are fascinating animals. My first sight of one was on rangelands near High River, where a badger yuck-yucked at me from a den mouth as I was exploring for larks' nests one morning. I hid behind a clump of willows nearby and watched that badger come from its burrow, glance alertly around to make sure no danger was near, then bark softly to call three youngsters from the den. It was marvelous to see the playful antics of the young ones, pouncing on one another for mock fights and rolling over and over on the green prairie wool, the mother taking part in the fun while keeping a lookout for enemies. It was one of the happiest animal-family scenes I have ever had the pleasure of watching.

Later, in the parkland part of Alberta, I saw another phase of badger life. This time the mother animal had been out after food during daylight hours, and was carrying a dead ground squirrel toward a hill-



ditional acreage he required to make his farm area profitable was to get into the business. The government passed the Act which was supported by the farmers' organizations over the province. But it never pleased those who wanted clearing in the Fraser Valley.

Now they have offered an alternate plan which they believe would be fair to them. They have suggested a "Land Clearing Fund". Money from this fund would be made available to farmers at a nominal rate of interest. It would be repayable over a period of five or ten years.

The proponents of the idea suggest that the government does not need to have thousands of dollars invested in equipment. They say that individuals should provide the equipment and at the end of the next ten years the government will have the money back, the clearing will be done efficiently, and there will be no loss to the government on depreciated equipment.

The resolution echoes the dissatisfaction expressed by coast farmers who when the land clearing scheme was proposed but the echo may have more merit than the original resolution. Today individuals can obtain the necessary equipment and competition will force them to accept the work in the more remote sections. That was not true nine years ago.

Fruit growers of the Kootenay and Okanagan have a heavy agenda for their three-day annual meeting. In addition to the reports from their selling and processing industry they have more than sixty resolutions to consider. It is not much wonder that the meeting holds special evening sessions, but without some procedure to eliminate duplicate resolutions or to offer the resolutions in a systematic manner they would be forced to extend their meeting.

The reorganization of local groups and representation on the central executive as well as election of delegates undertaken in 1953 proved the value of the planning started several years ago. The delegates arrived at

the meeting held in Penticton last January fully prepared to discuss the seventy resolutions offered. They had already discussed them fully with the growers in their own districts. That would not have been possible if they saw the resolutions for the first time when they arrived for the meeting.

Streamlined

Sixty-four years has taught the Fruit Growers' Association the value of having a well-informed membership. Members of the executive attend the local meetings to ask and answer questions. Then when the fall is over, the harvest completed, the growers give their attention to many of the problems that arose during the shipping season. In November they send resolutions to the secretary which they wish to have discussed at the annual meeting. He reviews these with the executive, makes up a master list which is sent out to each local.

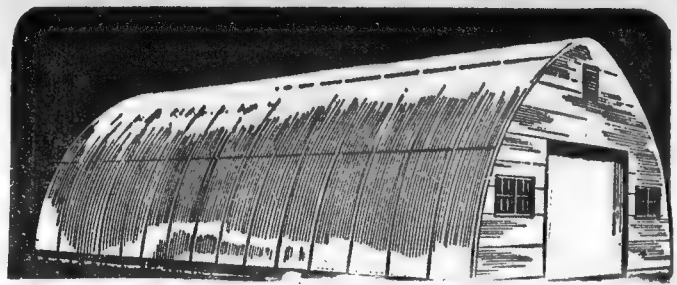
December meetings of the local groups are miniature annual meetings for they study each resolution and in some cases may direct their delegates how they wish them to vote. If in some way a resolution was misunderstood and was grouped with a similar one from another local there is still opportunity to present the original resolution at the general annual meeting.

Once the delegates are seated at the annual meeting they have copies of all resolutions in their hands. In addition they have reports from the numerous committees who have worked on specific problems brought up through resolutions of previous years and they have a report on action taken respecting other resolutions. They are prepared to speak and support or reject the resolutions as they are offered.

The meeting moves quickly. The work is completed in as little time as possible but no one is denied the opportunity to speak to a resolution. The only effect this streamlining has had on the annual meeting of the Fruit Growers' Association is to reduce the echo and after all if one wants to hear an echo he can still shout down the well.

Solution to last month's puzzle

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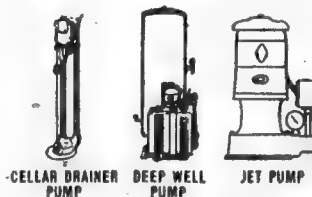
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THE hazard to human health is only one of the problems created by the modern craze for chemicals. Great as it may be, it is probably no more serious than the effects on soil fertility which are bound to result from some of the practices currently recommended.

Big patches of soil are sterilized with sodium chlorate each year to kill out perennial weeds; and it is the general belief that as soon as these treated areas

How safe are soil sterilants?

By JOSEPH PAUL

will grow another crop, the bad effects of the chlorate have gone.

The only attempt to find what happens to sodium chlorate in the soil, indicates the chemical

moves down to the subsoil with the moisture from rain or snow. But once in the subsoil it appears to be pretty stable and may stay there for years under prairie conditions. Fair crops may be grown without using the moisture and plant food from the third and fourth foot of soil.

But if a fair crop is to be grown in a dry summer; or if a really heavy crop is to be grown in good years; the crop must be able to use *all of the soil*. It is the third and fourth foot of soil that makes the difference between 35 and 45 bushels per acre in a crop of wheat. These are the differences that so often escape detection by our modern experimenters; but some people believe the last 10 bushels per acre are just as important as the first 10.

Illusion

Unfortunately, the chlorate treated spots have often given an illusion of increased production as soon as the top two feet of soil have become clear of chemical. The one or two years in which all plant growth is prevented, act as a perfect fallow for moisture conservation. These treated patches may be the only part of the field in which any moisture is stored for the next growing season; and it quite often happens they will produce a heavier crop than the rest of the field.

Once this condition has been observed, it is pretty hard to convince a person that sodium chlorate is going to lessen the yield in the same spots in later years; but our "research men" should not be so easily misled.

The worst is yet to come in this matter of soil sterilants. Note for example the 1952 report of the Alberta Department of Agriculture, where the Field Crops Branch reports it has

"continued to distribute Sodium Chlorate to municipalities at cost. Another soil sterilant Polybor Chlorate was also distributed. This product is absolutely non-inflammable and is being used where Sodium Chlorate might create a fire hazard."

In fact they distributed 25,784 lbs. of Polybor Chlorate in 1952, and Saskatchewan reports the use of 30,000 lbs. in the same season. The reports for 1953 are not in as yet, but no doubt the swing to Polybor Chlorate will continue, now that it has received the official blessing of Provincial Department of Agriculture.

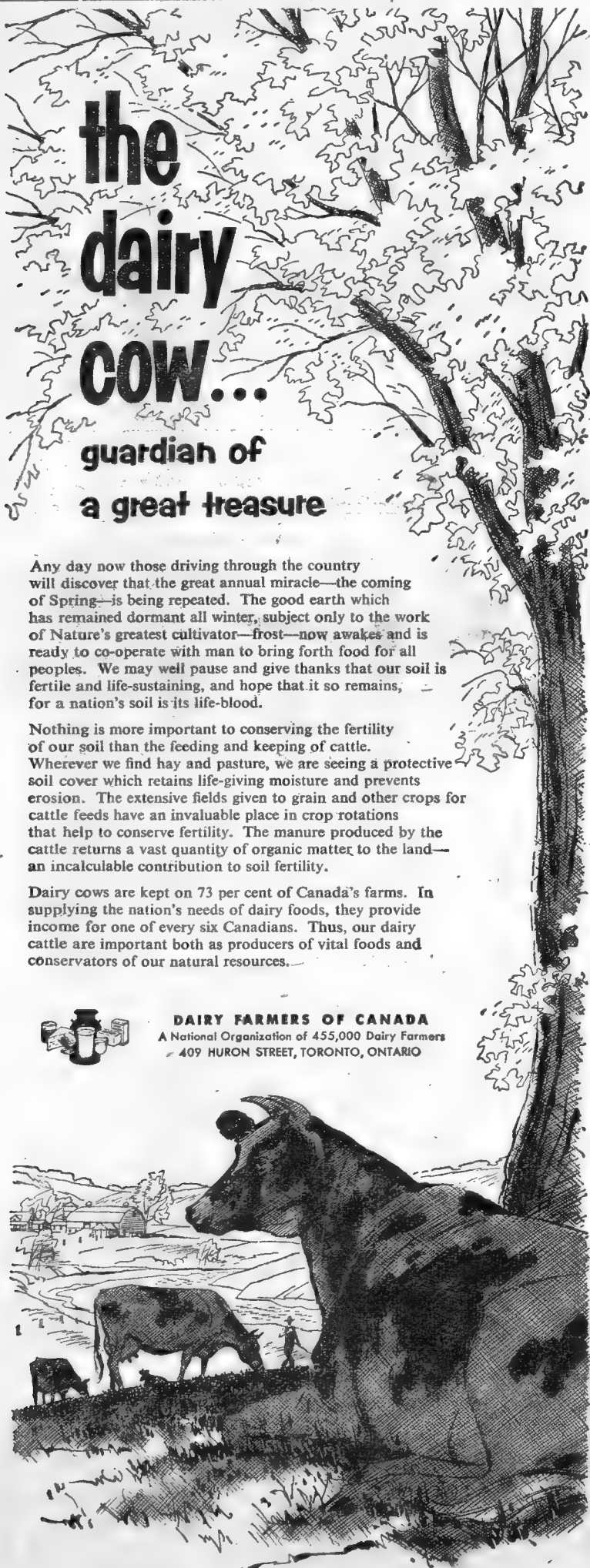
The Record

Now let us examine the record to see what this new weed killer will do for the soil. Boron is one of the principle elements in Polybor Chlorate and Chlorax. The preparations used should contain up to 15 or 20% of boron. Applications of this material have been recommended by the B.C. Department of Agriculture at the rate of 5 lbs. for every 100 square feet to kill couch grass. *This rate of treatment would put about 350 lbs. of boron on an acre of land.*

For the rest of the story on boron we should refer to "Soils and Men", where this interesting paragraph heads page 812:

"Some of the secondary elements have very narrow ranges of concentration in which they are of use to plants. Boron is one of these. For many plants in water solution cultures a few parts of boron per million are almost absolutely necessary for plant growth, while 20 or more parts per million are fatal to many plants. A familiar example of boron toxicity occurred during the World War when potash sources containing considerable borax were used in potato and tobacco fertilizers. In some cases as little as 30 pounds per acre resulted in greatly diminished yields, and applications in excess of 50 pounds killed the plants."

If the boron in 50 pounds of potash fertilizer can do that much damage what will 350



Any day now those driving through the country will discover that the great annual miracle—the coming of Spring—is being repeated. The good earth which has remained dormant all winter, subject only to the work of Nature's greatest cultivator—frost—now awakes and is ready to co-operate with man to bring forth food for all peoples. We may well pause and give thanks that our soil is fertile and life-sustaining, and hope that it so remains, for a nation's soil is its life-blood.

Nothing is more important to conserving the fertility of our soil than the feeding and keeping of cattle. Wherever we find hay and pasture, we are seeing a protective soil cover which retains life-giving moisture and prevents erosion. The extensive fields given to grain and other crops for cattle feeds have an invaluable place in crop rotations that help to conserve fertility. The manure produced by the cattle returns a vast quantity of organic matter to the land—an incalculable contribution to soil fertility.

Dairy cows are kept on 73 per cent of Canada's farms. In supplying the nation's needs of dairy foods, they provide income for one of every six Canadians. Thus, our dairy cattle are important both as producers of vital foods and conservators of our natural resources.



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pounds of it do to an acre of good B.C. soil? And good B.C. soil is a lot harder to come by than Polybor Chlorate, as the market stand today.

Since the end of World War II the countryside has been fairly crawling with agrolologists out to test new weed killers, insecticides, fertilizers and other chemicals. This "hit and run" research usually lasts only one year in a field. As soon as a "satisfactory" result is obtained, or a "favorable" observation recorded, the test is over. This is the only method fast enough to meet the persuasive demands of the chemical industry, to try out the constant supply of new products which are described in such promising terms by their public relations men.

Thus it happens that the same officials who seek to give us leadership in the matter of soil conservation can recommend the use of Polybor Chlorate to kill couch grass; and they can include both items in the same report without a qualm.

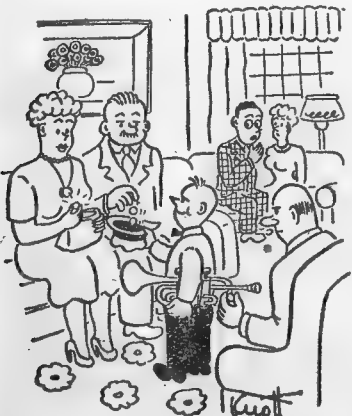
Cultural Control

There isn't a real farmer in Western Canada who can't control couch grass by tillage if he really wants to. But no amount of telling will convince one that he can control it if he hasn't the will to get out and do so. Naturally our agrolologists have found less argument when they recommend soil sterilants. Likewise they find it much simpler to recommend a shot of serum for your cattle, than to put over a programme of breeding, selection, and feeding for disease resistance.

The best remedy for the ill effects of over indulgence is moderate eating and drinking, with a glass of hot water before breakfast just to make sure. Few people will argue with that; but the closer you are to the bright shelves of the modern grocery, liquor vendor, and corner druggist, the harder it is to be sensibly old fashioned.

The easy course for the farmer of today is to get in step with the current craze for chemical farming and "hypodermic husbandry"; but there are increasing signs of a hang-over that will haunt the next two generations.

(This is the second of two articles.)



"We'd better quit making him play for guests."

Trees for Alberta

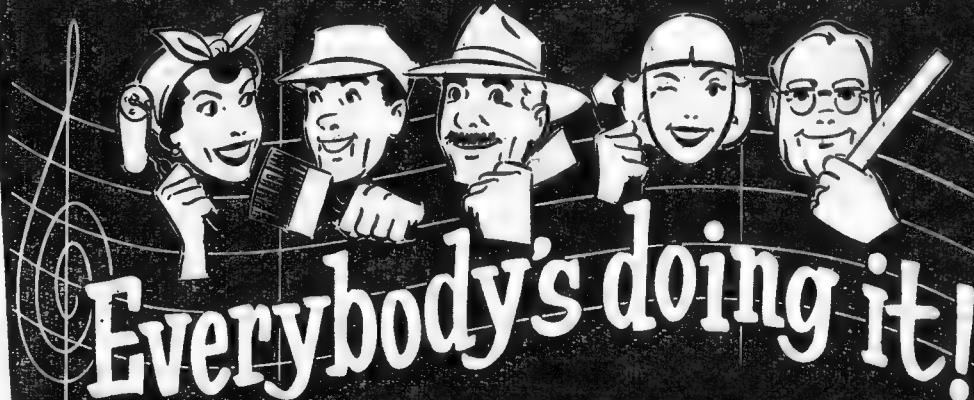
FOR those who thought of it early and prepared the land for it, but just didn't get that application in we have good news. P. D. McCalla, Supervisor of Horticulture, Alberta Department of Agriculture, says that there are still some trees available for planting in 1954. There is still a fairly plentiful supply of Green Ash, Maple,

Lodge Pole Pine, American Elm, cuttings of Poplar and Golden Willow. Smaller quantities of rooted cuttings of Laurel Leaf Willow and Russian Poplar as well as Scots Pine (10 - 12" in height), Chinese Bush Cherry (for low hedge) and Elderberry are available along with limited supplies of Mountain Ash, and 3 species of hardy roses. Siberian Larch can also be obtained.

The district agriculturist has a complete list of trees and is ready to help you choose varieties for your shelterbelt. He also has application forms.

Time and supplies are running short so Mr. McCalla would like to urge all interested in shelterbelts to send their applications to the Field Crops Branch, Alberta Department of Agriculture, Edmonton, as soon as possible.

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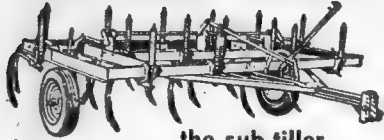
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**Organic manuring
is still the best**

By JOHN R. ATKINSON

IN his very able article, "Or-
ganic or Chemical Ferti-
lizers? Both are Important," in
the January issue of the Farm
and Ranch Review, Mr. Percy
H. Wright gives his sincere and
forthright views on the need for
more and more chemical ferti-
lizers, if mankind is to avoid
mass starvation.

On the other hand, there are
those who believe that organic
matter and the biological life in
the soil are infinitely more im-
portant to health and to per-
manent soil fertility than man-
made chemicals. They also be-
lieve that man's numbers and
welfare are closely tied to the
way this fundamental law of
nature is respected. We, for I
am one of them, are commonly
referred to as the "Organic or
Biological School," and, some-
times other names too, depend-
ing a bit on the temper of the
person holding forth.

The biological school consists
of a host of bona-fide farmers
and a number of scientists,
medical men and townsmen. We
claim that chemical fertilizing
and poison spraying is "unna-
tural farming" and that this un-
natural farming is causing
disease of crops, death to bees
and birds, harm to soil bacteria,
maladies in animals and perhaps
even filling some hospital beds.
Some of us have good-sized
farms where we practice what
we believe and are content to
let organic methods speak for
themselves.

The Orthodox School hardly
needs introduction, many are on
the public payroll. All are ex-
ponents of the merits of humus
and rightly so. On the subject
of chemical fertilizers some are
mild and some are keen expon-
ents. To the latter a shining
example of how to farm is the
Broadbalk field at Rothamstead,
in England.

A portion of this field has
been in continuous wheat for
one hundred and ten years and
the yield has been maintained
by chemical fertilizers. Some
visitors have been less enthusi-
astic when they find out that
the wheat seed is changed each
year, also less again when they
observe the barley plots, under
the same management on the
poorer land at Woburn. How-
ever, the official answer to the
mounting evidence that acid-
treated fertilizers, used in quan-
tity and for lengthy periods, are
something of a wolf in sheep's
clothing, is, that they are harm-
less.

The Orthodox School seem
unanimously of the opinion that
they do not know the answer to
obtaining a plentiful supply of
humus. WHY DO THEY NOT
KNOW? It is plain some of our
grandfathers did. The value of
grass legume rotations, and the
lesser value of grass alone, for

promoting humus was known
for ages before Rothamstead.

What force was it that more
or less intercepted this tradi-
tional knowledge and made that
great and sturdy farmer, Robert
Elliot, feel compelled to do
something to help the farmer
help himself? In 1887 he took
over the management of his
1,250-acre farm in the south of
Scotland. Here experience proved
that four years was the best
time to leave a field in grass le-
gumes in order to produce
abundant humus for the follow-
ing four years arable crops. He
had the honor of being asked to
present a report of his experi-
ences before the Royal Society
for the promotion of science. I
quote from his writings:

"The cheapest manure is turf
from good grass and deep-rooting
herbs. The cheapest and the best
tillers, drainers, and warmers of
soil are the roots of grasses and
herbs." THIS CHEAPEST MA-
NURE, OR HUMUS, WHEN DE-
CAYING, FEEDS THE SOIL BAC-
TERIA, WHICH IN TURN RELEASE
THE INERT MINERALS IN THE
GROUND.

Sir R. George Stapleton, di-
rector of the Welsh plant breed-
ing station, 1919 - 1942, said
that he kept Robert Elliot's
book at his elbow. When writ-
ing a forward to a new issue of
the same book he stated that
Elliot had well nigh done away
with the dung cart, and that his
methods had been proven to the
hilt on thousands of farms.

In the summer of 1952 Mr.
Arthur Troughton of this same
plant breeding station at Aber-
stwyth, Wales, put out a release
showing that the weight of
grass roots found in the top six
inches of a well established pas-
ture may range up to ten tons
an acre, also that the value of
one ton of roots, plowed in,
equals four tons of muck. Be-
sides this, there is the additional
value of turning solid cement-
like old fields and gardens into
friable soil.

Mr. Troughton also tells how
to manage a pasture so that it
can accumulate the maximum

amount of this valuable fiber.

Someone is going to suggest
that it is much easier to build a
good pasture in Britain than
Western Canada. I agree. How-
ever, in my lengthy experience
on the grey wooded, and black
soils of Alberta, I have found
that by use of grass legume ro-
tations, pasture fields and hay
fields that were given the
chance to form sod, the resul-
tant increase in soil fertility and
crop yields bears evidence that
the same principles apply here
as in Britain.

For best all round results,
four years seems to be the right
time to leave grass legume fields
in hay or pasture. All thistles
should have disappeared in the
hayfields, though native grasses
will be creeping in. Any sur-
viving thistles in straight pas-
ture can be destroyed if broken
out of sod at the correct time to
break any sod, that is, between
June 10th and July 10th.

Nitrogen is needed for speedy
decomposition of sod, therefore
breaking of sod should be done
while the nitrogen gathering le-
gumes are in the stage of fairly
near full vigor. Shallow breaking
of the sod is another essential for
best results. If quack grass is
present start early, go shallow, go
often.

We have had heavier grain
yields following pasture than hay.
This can be readily accounted for
by the droppings from the animals
in the pasture and the considerable
amount of uneaten feed left in the
field. One such field gave us
better than 140 bushels of Eagle
oats to the acre in 1951. This
particular field has probably never
been summer-fallowed and has
been in cultivation for upwards of
ninety years.

From the standpoint of fer-
tility, my observation would
lead me to believe that crop
land subjected to a rotation in
which two-thirds is in grain and
one-third in grass legume, taken
together with livestock and
good management, should more
than maintain fertility even if
most of the grain is sold.

A swift speeding up of fertil-
ity building is accomplished
where more than one-third
grass legume is included in the
rotation, the crops are fed, and
manure properly utilized on the
farm. Several books have been
written by farmers, who, start-
ing with run-down farms have
developed soil fertility to the

First Swim

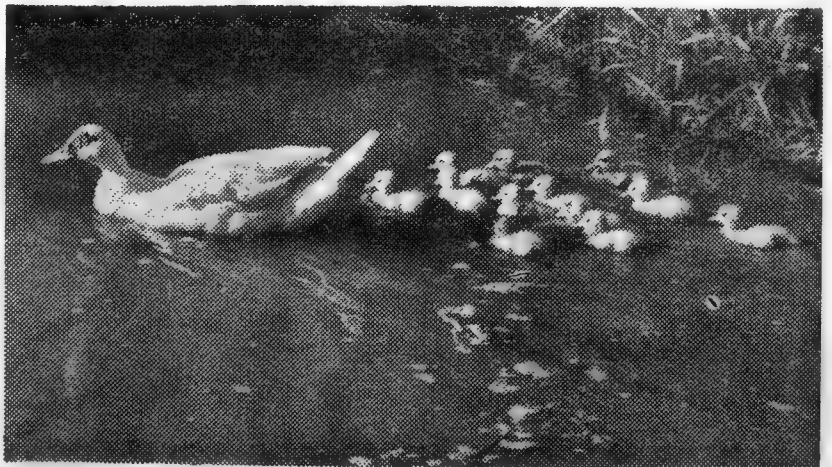


Photo by Don Smith.

optimum, and over, for grain crops.

Five-Year Trial

Starting in 1934 we used Chemical Fertilizers on about one hundred acres of our grain crops. However, by harvest time, 1939, we estimated they had involved us in about as much loss as profit. Later, for two years, we co-operated in having properly supervised tests of various amounts of fertilizer on grain crops, also one year's tests of various amounts on one of our grass 'egume fields. I still have the reports of these tests. They confirm what we had expected, i.e., that chemical fertilizers did not recompense us for their cost, and the extra labor involved.

There is much to be said for grass legumes besides their being the basis of permanent fertility. They give stability to the farmers' income. In the years of drought or hail when grain crops perish, at least one good cut of hay can be secured. Hail has never noticeably cut yields on our grass legume fields, or those of our neighbors. Drought has occasioned a deep cut in the total yield of hay and grass some summers, such as 1937 and 1949, but never in over forty years' experience have our total hay yields been as low as one ton per acre per summer—nor the corresponding live-weight increase of farm animals, or yields of milk per acre been less.

Then, too, grass legumes are a big factor in preventing soil erosion, assisting weed control, breaking up hard pan, to let both air and moisture into the soil, and feeding the bees. When costs are examined over several years, their more steady average of cash value, compares well with grain crops. Certainly nothing else can compare with their effect of making a farm look prosperous and a thing of beauty.

Short of compulsion, or subsidy, I do not look for any great expansion in the sales of chemical fertilizers in Western Canada. That minerals such as ground limestone and ground phosphate rock will be used in quantity is fairly certain. Declining yields and soil erosion that affect so much of our farm lands today will never be stemmed by the singing of "O Canada We Stand On Guard For Thee", or by more chemical fertilizer urgings. Rather Nature's Nitrogen Humus Factory stands ready and waiting to do the required job on any farm AND DO IT RIGHT. It only needs putting in motion.

I feel sure that thousands of observant Alberta farmers and the District Agriculturists too, have come to somewhat similar conclusions from their own experiences. Farmers and scientists in increasing numbers everywhere today are giving their verdict that organic manuring is, by far THE CHEAPEST AND THE BEST.

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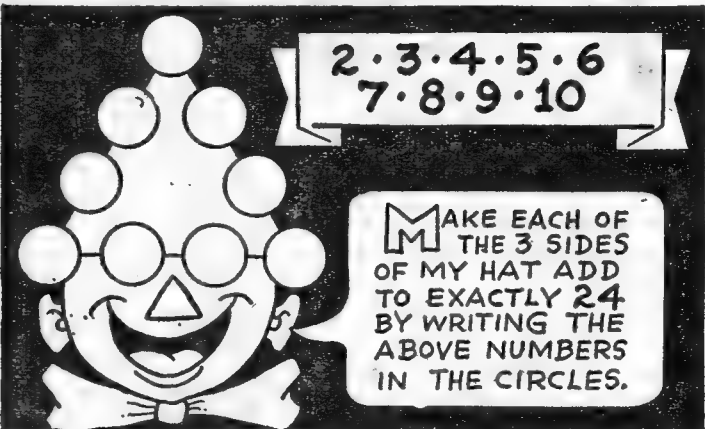


GIRL, GLOVE, GOAT, GRASS, GRASSHOPPER, GUN, ANT, ANTLE, ANKLE, ARM, ARROW, APPLE, MALET, MARBLE, MOUSE, MOUTH, MOSQUITO, MUSHROOM, EAR, ELASTIC, ELBOW, ENVELOPE, EYE, EYEBROW.

TRY TO SPELL AT LEAST 24 ENGLISH WORDS, OF 2 OR MORE LETTERS, BY READING THE LETTERS ACROSS IN ROTATION.

→ FLATHEREINOTTEAM

FLAT, LA, LAT, AT, LATH, LATHE, THE, HE, HER, LATHER, THERE, THEREIN, HERE, HEREIN, ERE, RE, REIN, IN, NO, NOT, NOTE, TEA, TEAM, AM.



2 · 3 · 4 · 5 · 6
7 · 8 · 9 · 10

MAKE EACH OF THE 3 SIDES OF MY HAT ADD TO EXACTLY 24 BY WRITING THE ABOVE NUMBERS IN THE CIRCLES.

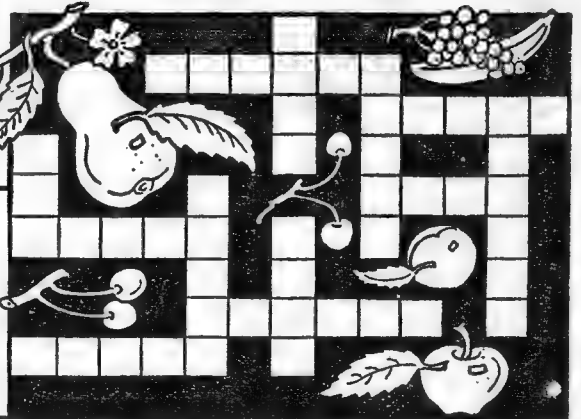
CLOCKWISE FROM THE TOP: 6, 4, 5, 9, 2, 10, 3, 7, 8.

A CROSS-WORD FRUIT SALAD

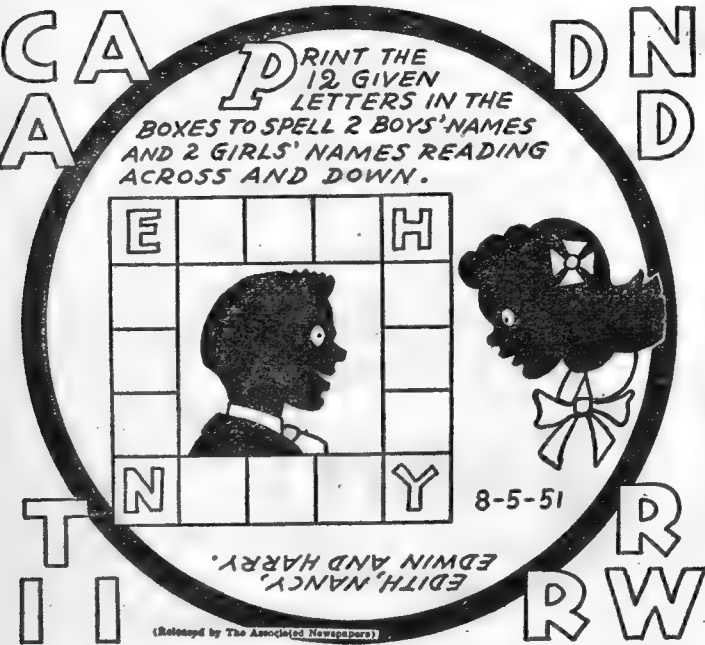
(Released by The Associated Newspapers) 8-5-51

PRINT A LETTER IN EACH BOX TO SPELL 12 FRUITS READING ACROSS AND DOWN.

A.W. NUGENT



ACROSS - BANANA, PEACH, LIME, GRAPE, ORANGE AND MELON.
DOWN - FIG, LEMON, DATE, PEAR, APPLE AND CHERRY.



PRINT THE 12 GIVEN LETTERS IN THE BOXES TO SPELL 2 BOYS' NAMES AND 2 GIRLS' NAMES READING ACROSS AND DOWN.

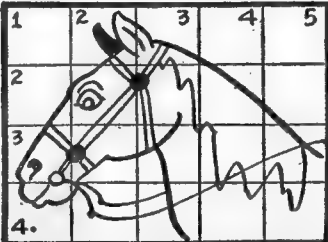


8-5-51

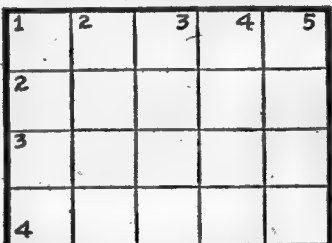
EDITH, NANCY, EDWIN AND HARRY.

(Released by The Associated Newspapers)

COPY MY PICTURE



IN THESE BOXES.



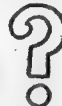
KIDDIE CORNER

WHY IS COAL SUCH AN ODD THING TO BUY?



BECAUSE IT GOES TO THE CELLAR INSTEAD OF THE BUYER.

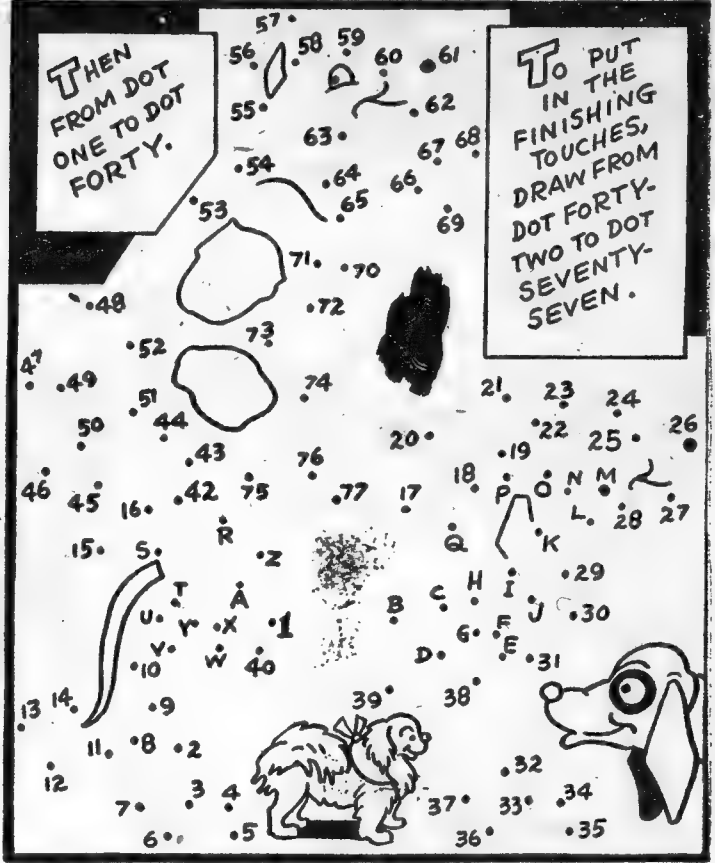
HOW QUICKLY CAN YOU THINK OF FOUR CONSECUTIVE NUMBERS WHOSE SUM IS 50?



50

NUMBERS ELEVEN, TWELVE, THIRTEEN AND FOURTEEN.

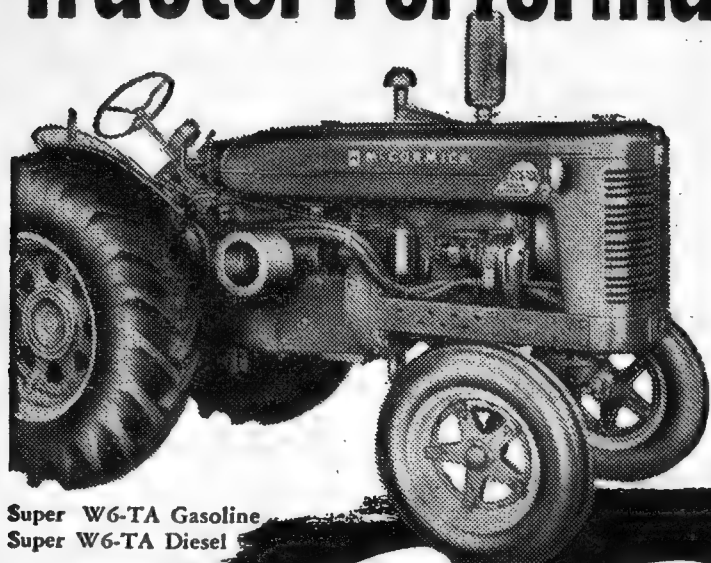
DRAW FROM DOT A TO DOT Z IN ALPHABETICAL ORDER.



THEN FROM DOT ONE TO DOT FORTY.

TO PUT IN THE FINISHING TOUCHES, DRAW FROM DOT FORTY-TWO TO DOT SEVENTY-SEVEN.

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Tractor Tires...*

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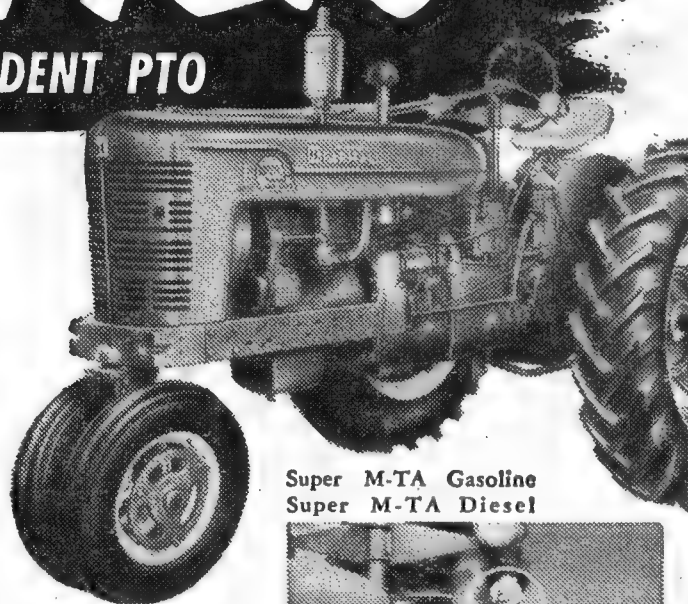
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McCormick Tractors*

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Super W6-TA Gasoline and Super W6-TA Diesel**

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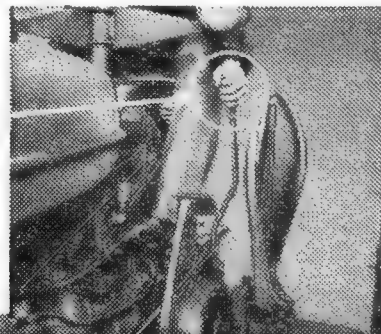
A COMPLETELY INDEPENDENT POWER TAKE-OFF that maintains rated speed independent of tractor motion. PTO driven machine can be started or stopped — standing still or *on the go*. This power-take-off has exclusive features heretofore unavailable in any other tractor.

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Overhaul those House Plants and do it now!

By H. F. HARP

THE lengthening days accompanied by increased warmth gives rise to renewed life to house plants which have been in a semi-resting state through the dark days of winter.

Some plants resent too frequent disturbances at the root and should not be re-potted unless they are root-bound. These will enjoy having the top inch or so of soil removed and replaced with fresh material at this season of the year. A teaspoonful of commercial fertilizer such as "Vigoro" should be sprinkled on the soil surface before the new soil is added. All decayed leaves should be taken off and the plant thoroughly washed in soapy water to which is added a teaspoonful of Black Leaf 40 for the purpose of ridding the plant of insect pests. The plants most likely to need top-dressing only will include: Large Ferns, Rubber-plants, Amaryllis, Cactus and various other succulent plants.

Repotting — Where repotting is needed the first requirement will be a quantity of prepared soil and suitable sized containers. The soil is made up by mixing two parts good garden soil, one part granulated peat and one part sand. This mixture can be moderated to suit the special needs of some plants. African Violets, Begonias (both the tuberous and fibrous varieties) and also Gloxinias will enjoy a mixture containing more peat and sand, while Cactus and succulent plants require a soil which is half soil and half sand. The soil must be well mixed before putting it through a half-inch meshed sieve, using the rough portions to make a one-inch layer on top of the drainage. Drainage is most important, especially where tin cans are substituted for earthenware flower pots. These tin cans should have a few holes punched in them and a few pieces of broken crockery or coarse gravel placed in the bottom.

Boston Ferns are often a problem when they are allowed to develop into large specimens, but they can be reduced in size and rejuvenated in vigor by repotting them now.

The operation is a major one which requires plenty of room to work and plenty of time too. The plant should be carefully removed from its pot; the drainage gravel or crocks picked out with a sharp stick and most of the soil shaken from the roots. The work is greatly facilitated if the plant has been allowed to become fairly dry. Plants that have just been watered will not be easy to remove from their pots.

Old fronds of Boston Fern should be cut out with a scissors or sharp knife—especially those

which bear seed spores; these are seen on the reverse side of the leaf as brown spots regularly spaced along the edges and mistaken by some people for rust or scale disease.

In some instances it may be necessary to cut out whole portions of the plant and this should be done where there are enough new fronds to start a healthy plant. A common mistake is to set the young plant too deeply in the soil. The crown should be at soil level or slightly below. The soil is carefully worked among the roots with a potting stick; a piece of an old broom handle serves the purpose well. After it has been packed down fairly solid, the newly potted plant should be well watered and shaded from the sun.

• Over watering must be guarded against now or there will be danger of rotting the roots.

Geraniums—Now is the time to cut down the Geranium plants which were taken up from the open ground last fall and repotted. The tip growths may be used as cuttings to increase the stock if so desired. They should be about four inches long with a clean cut at a leaf joint or node as it is called. About six or seven of these cuttings can be inserted around the edge of a four-inch flower pot containing sand or a mixture of half sand, half peat. They will root readily if placed in a sunny window, but should be shaded for the first few days by placing a sheet of newspaper over them during the sunny hours. In three or four weeks these cuttings will be rooted well and should be potted into small pots, using the soil mixture as recommended for repotting the large plants. By bedding-out time, which is the first week of June, they will be well established bushy plants if the tip growth is pinched out when six or eight leaves have developed. The old plants from which these cuttings were taken should be kept without water for a week or so or until they show signs of starting into growth again. A little fertilizer will benefit these plants also.

House Plants From Seed

In the month of March, seeds grow more easily than at any other time, and quite a number of plants suitable for house culture can be raised from seed sown now. Coleus or foliage plants — Begonias, Gloxinias, Primulas, Flowering Maples, Asparagus Ferns, and many others are included in this group. As the cost of seed is not the most important factor in raising plants, the very best strains of seed should be obtained. Bargain-priced seed often proves a bad investment.

Order from a reputable seed house and you will be assured of seed that will be true to type and of high germinating quality.

Sow in pots of the four-inch size which must be clean, or if new, they should be soaked for an hour or so in water. Drainage is most important or the soil will soon become soured so that soil aeration will become impaired and the tiny seedlings yellow and unthrifty. About one-third of the pot should be filled with coarse gravel over which is placed an inch of the rough portion of the sifted soil after it has been passed through a quarter-inch sieve. The fine portion of the soil mixture is then used to fill the seed pot to the brim gently pressing it down so that room is left to hold water.

The seed pots are then stood in a bowl of water reaching about two-thirds up the pots. When the surface of the soil has become wet, the pots are removed and allowed to drain of excess water.

The seed is then scattered very thinly over the surface of the wet soil. In some instances no covering of the seed is necessary. This applies to Begonias and other species having dust-like seed. A good general rule to follow is to be guided by the size of the seeds sown, covering them to a depth equal to that of their size. The pots should be covered with a piece of glass over which is placed a sheet of newspaper and set on the window sill.

If they require watering before germination takes place, the same method should be adopted as outlined at sowing time. There must be no delay in removing the paper and glass once the seed has germinated or the tender seedlings will become drawn up and weak. When large enough to handle they are transplanted into shallow boxes or pans, spacing them about two inches apart. When four or five leaves are developed the little plants can be safely potted into three-inch pots, and later into five- or six-inch size as required.

Propagation — Most house plants can be increased by stem or leaf cuttings. Stem cuttings are made from the growing points of the plants. The best material for cuttings is from firm wood, neither hard nor soft, and they should be planted without delay or placed in water so that they will not dry out.

Leaf-cuttings are used to propagate African Violets, Gloxinias and some kinds of Begonias. Leaves with a portion of the stem attached are cut from mature plants and inserted in pots of sand. They can also be rooted in glasses of water, but should be potted into small pots containing sandy-soil as soon as roots are formed.

The Cactus and succulent plants need slightly different treatment. The cuttings are best exposed to air for a few

hours before they are put in the sand. No shading is needed and only sufficient water to prevent them drying up.

Rubber plants, which have become "leggy" by loosing their lower leaves, may be air-layered by making a two-inch diagonal cut just below the healthy leaves. This cut should extend about half way through the stem and a pea-sized piece of gravel placed in the cut to keep it open. Wet moss is then tightly wrapped around the wound and tied with raffia, or, better still, the moss can be wrapped in "plyofilm" tied with cotton string. Roots are produced from the cut surface of the stem which can then be severed from the old plant and potted. Care must be taken not to let the ball of moss dry out or the purpose will be defeated.

Seasonable Hints

As the correct time for sowing seeds is a very important factor in securing satisfactory plants of tomatoes, and other vegetable plants which are sown indoors as well as annual flowers for bedding out a rough time-table is hereby given: March 15th to 20th, sow vegetables, celery, egg plant and peppers.

Flowers — Snapdragons, Pansy and Petunias.

April 1st to 7th — First sowing of tomatoes to obtain a few plants to be potted on into four- or five-inch pots. April 15th will be time enough for the main crop. Stocks, Asters and Marigolds may be sown at the same time.

Sow thinly and grow the plants sturdy by affording them a sunny window. Transplant the seedlings as soon as they make their character leaves, spacing them at least two inches apart in shallow boxes. Water as required using boiled water if damping off has been a problem, also it is a good plan to water the seedlings in the morning so that they are not lying in a saturated state over night.

Justice Is Done. In Dallas, a few days after obtaining the release of Dewey Leon Hipp, jailed for drunkenness, Attorney Abe Byers asked police to re-arrest his client, angrily explained: "He gave me a hot check for \$30."

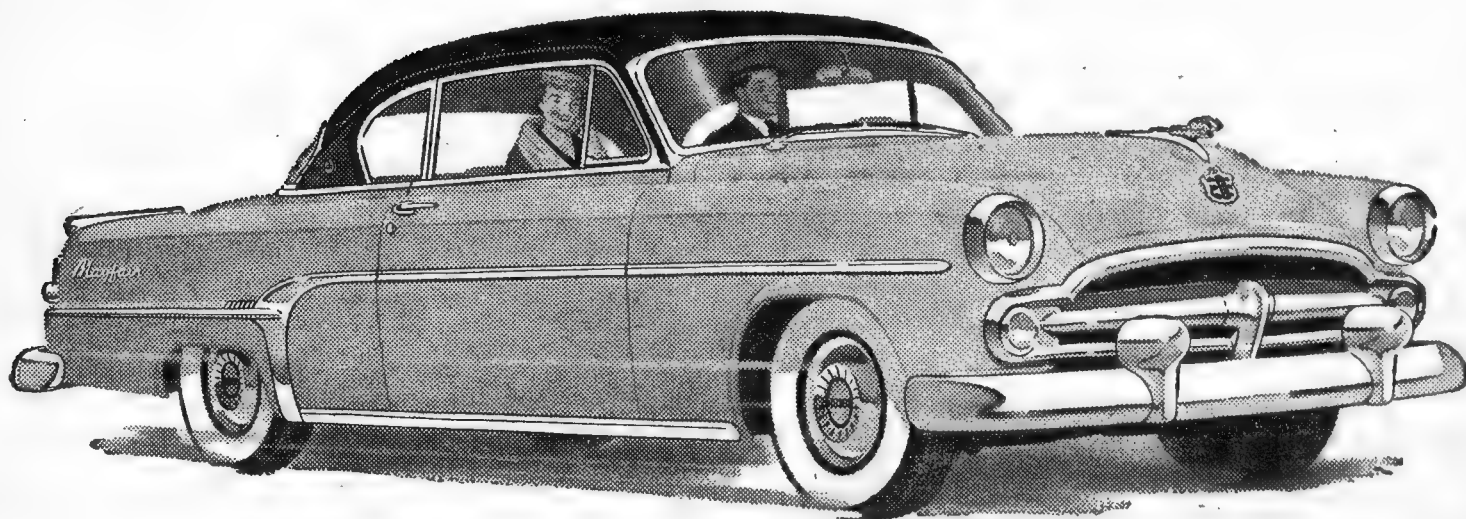


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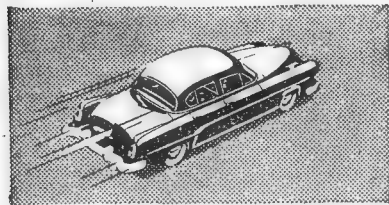
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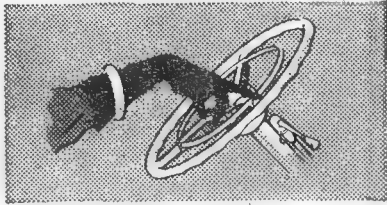
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Teachers were strict but were respected

By A. L. O'FARRELL

WE were busily arranging the details of the farm camp for teenagers. Right in the middle of everything one of the directors from the university objected to our having any rules. "Just leave them alone," she said of the boys and girls. "They'll make their own rules."

How often nowadays we learn of teenagers being injured or killed in car accidents because they were making their own traffic rules! And modern educationists keep right on callously insisting that our young people have more "self-reliance" and "poise" since progressive education took over because they are allowed to "express themselves more freely." But no one is free who is not master of himself. Surely there must be a better way for today's youngsters to express themselves than by flaunting all rules they do not make.

Problems of discipline crop up in every age. They aren't always handled properly. Yet injustices are invariably the exception rather than the rule. Modern thinkers are exaggerating the "cruelty" and the "tyranny" of long ago. After all, an occasional trip with Dad to the woodshed had its merits!

My own mother was very strict. She kept a willow switch on top of the cupboard and all she had to do was glance at it significantly when we children started acting like little savages. But more often she made us sit still in a chair and consider our sins. When we were honestly sorry we were pardoned and given another chance. Or if we had been exceptionally naughty it was, "Take off your shoes and stockings and go to bed." After a little rest, we made a new start.

No Tyrant

Mother was no tyrant. Indeed, she was ever our best playmate. But she stood for no nonsense from our earliest days. She never put things out of reach. Even as toddlers we knew we must leave them alone. We were allowed to hold the little glass slippers in our hands sometimes. Or use the fragile cups and saucers at Sunday morning breakfast.

We could listen to the roar of the seashell, and handle the books if our hands were clean. But mother tolerated no temper tantrums to break down her authority and we loved her for keeping things anchored.

I remember with affection the teachers who taught me forty years and more ago. They were not cruel monsters because they made their pupils accept the consequences of their own actions. Whatever else they didn't know, they knew life demands that and the school was a place where children could learn it less painfully than out in the world later.

Oh, yes, all those early teachers had "rules" for us. This made us feel we rated fixed standards, that school was important. We did NOT walk in fear but in respect of the teacher. Obedience wasn't so much forced upon us as it was a standard we strived for because even then we sensed it did something for us. It gave us poise. Stability. We felt more secure with our rules than today's youngsters do without them.

Some Certainty

For we knew exactly what was expected of us and what we had to live up to, and so there was a minimum of frustration. In the school-rooms of yesterday, any restrictions were precisely the kind that prepared us for the restrictions of life at

that time. We were taught some degree of restraint. We learned we couldn't make our own rules. Very few of us were unhappy about this.

Usually a child looks forward to school life, although he is aware there will be some necessary curtailment of his freedom. He is eager and full of great expectations when he enters school. Thirty-four years ago I heard a teacher express it wisely like this:

"The child expects school to be different. He will be disappointed if it isn't. He expects rules and regulations. He expects to learn how to abide by them. He isn't an object of pity. The normal child adjusts to school readily."

Whether he is normal or not, leaving the child to make his own rules must be very frustrating to him. It is more cruel than yesterday's method of charting his way for him until he could do it himself. The home and the school are still the safest places where a child may learn he can't live life according to his own rules only. Parents and teachers should still be the best people to teach him this.

Too often lack of discipline now comes less from fear of frustrating the child than from reluctance of the modern adult to assume the responsibility of restraining him. Today's tragedy is that many children grow into reckless teenagers because they feel no one loves them enough to make them do right. Much of their behavior is just bravado to hide their fears. The modern philosophy is more tyrannical than the old in that it stubbornly adheres to a theory that consistently brings so much grief and shame in its wake.

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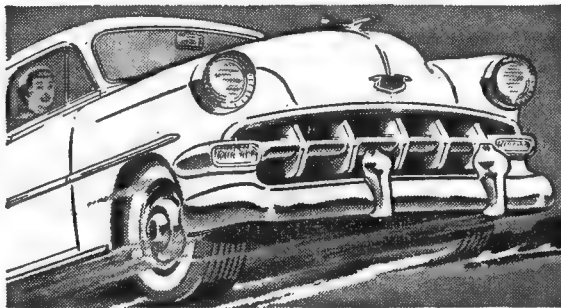
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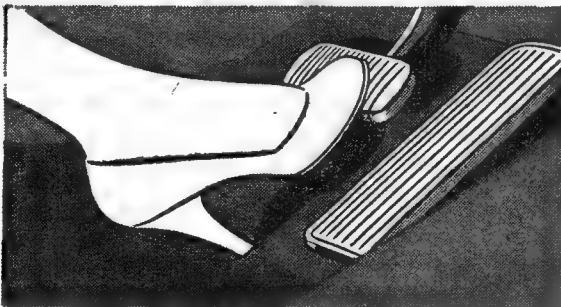


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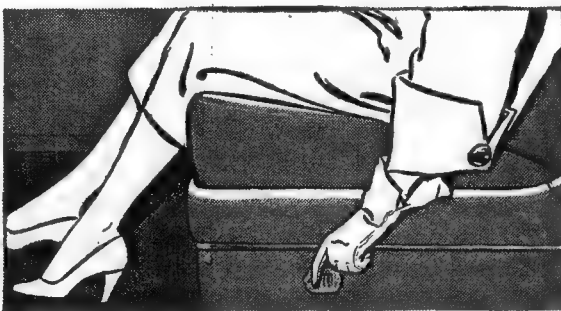
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Farm Electrification

... how it has expanded in the last few years

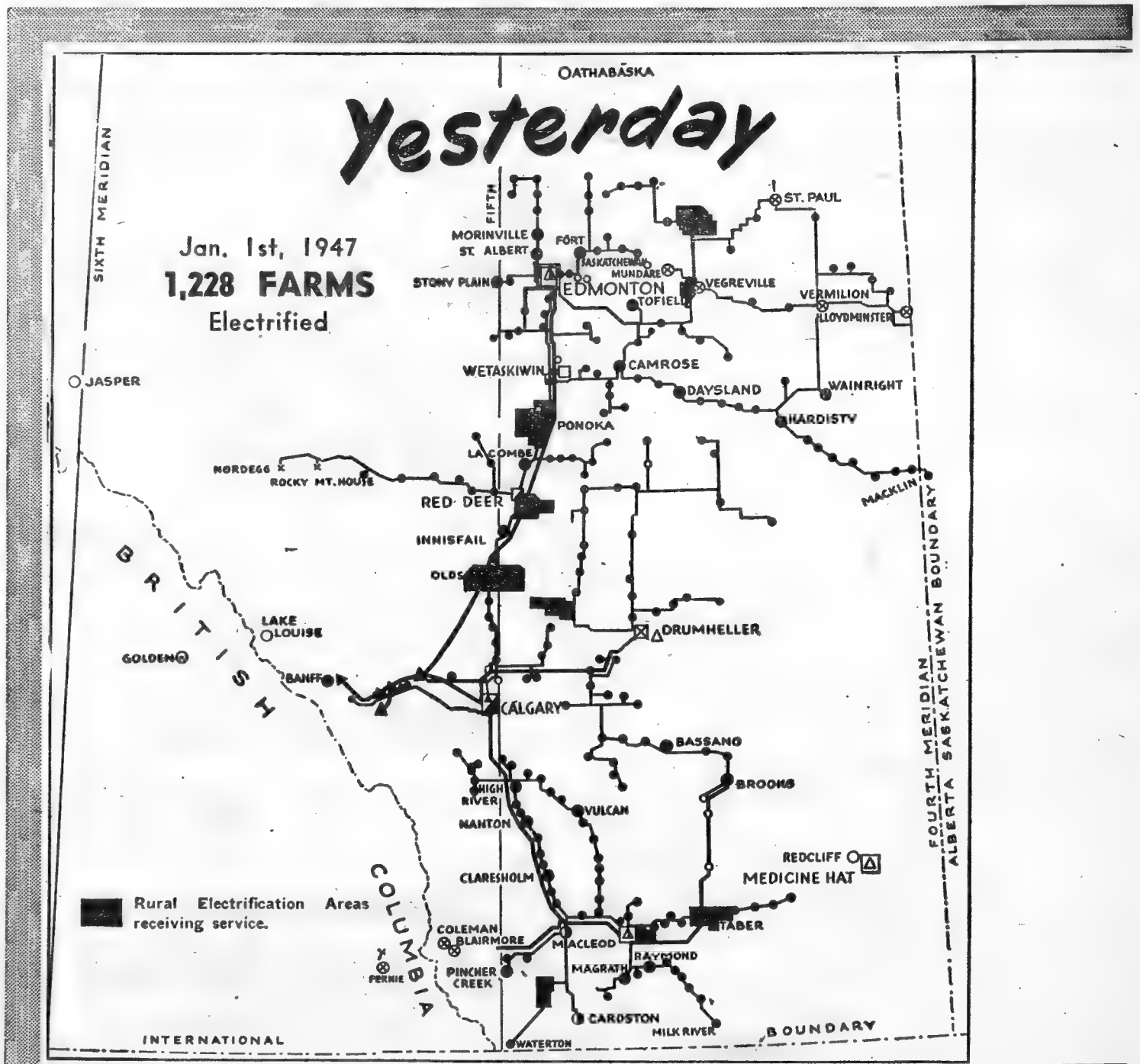
For every Alberta farm electrified at the beginning of 1947 there are twenty electrified today. From the nine small areas served at that time, Alberta Farm Electrification has expanded until today it reaches from the International Boundary to a hundred miles north of Edmonton, and from the Saskatchewan border to the timber fringes west of Rocky Mountain House. In addition, several areas in the Peace River District are also electrified.

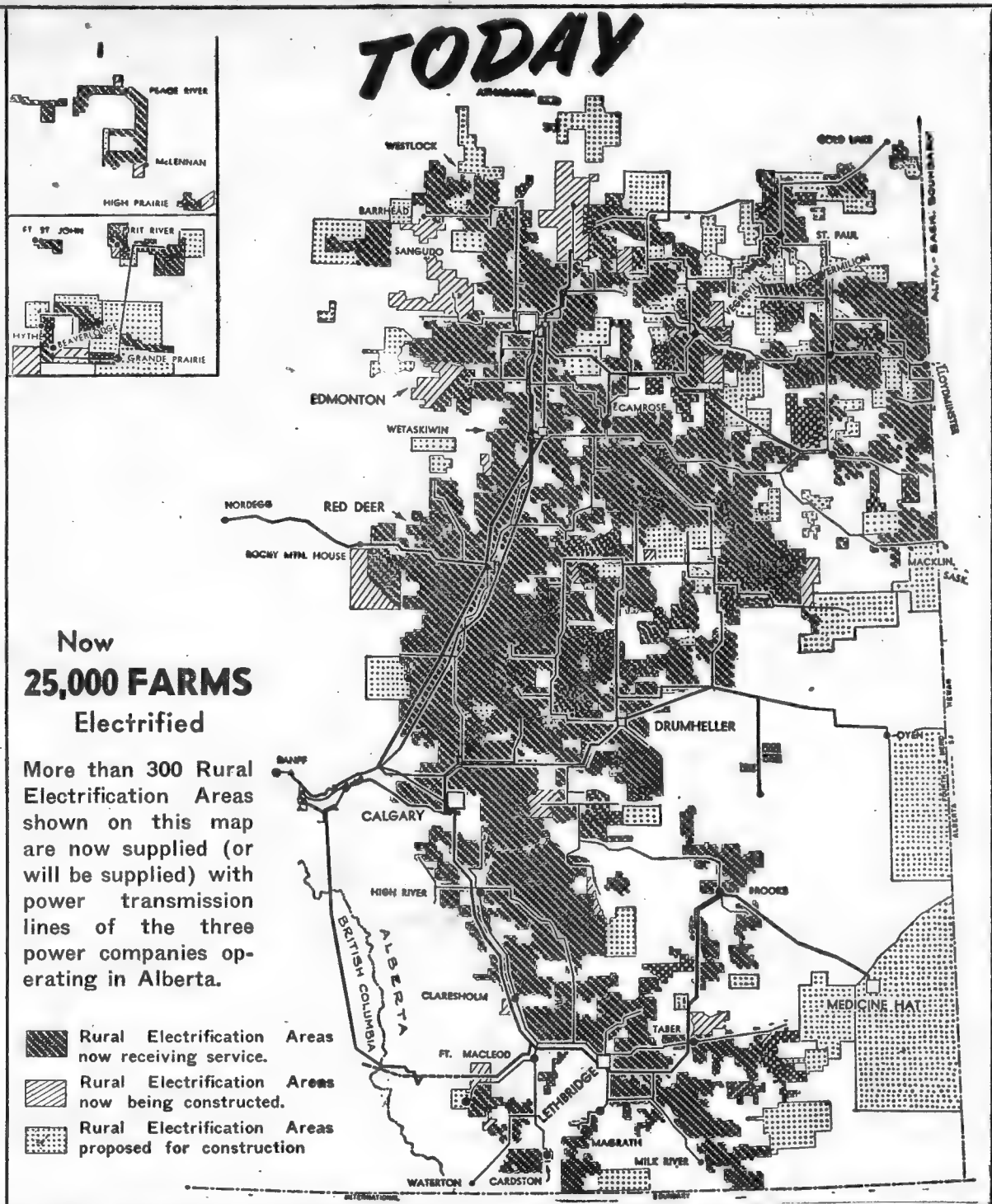
These two maps give you a graphic comparison. As indicated, many of the gaps are being rapidly filled in.

To achieve the present expansion in Farm Electrification great quantities of materials have been required. Included are the following:

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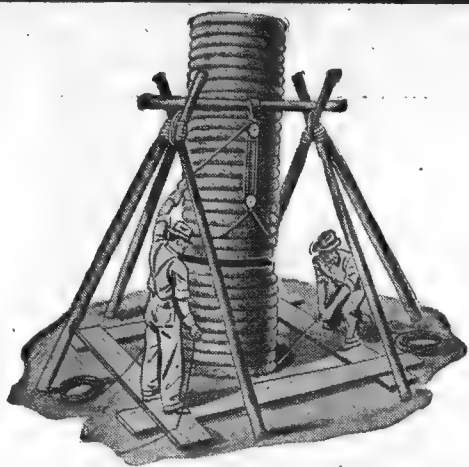
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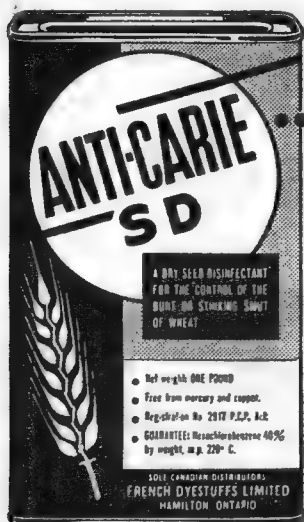


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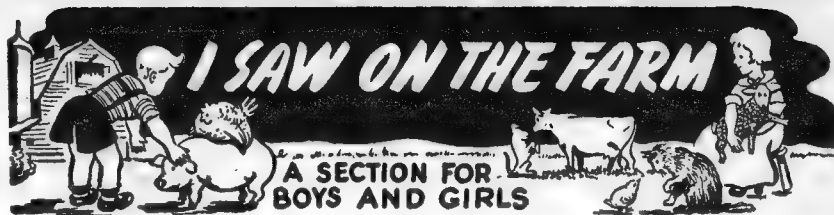
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One spring when Dad was combining he drove over a mother duck whom he did not see. The duck flew away and looked as if she was hurt. After combining about an other hour, Dad accidentally ran over a mother hawk. The knife of the combine cut her head off. Mom took the hawk's eggs, and, in the evening when the mother duck did not come back, Mom took the duck's eggs too. She put them under the clucker. After a week later the duck's eggs hatched out, but the hawk's eggs did not hatch. The hen took the ducks and left the hawk's eggs. The ducks stayed with the hen for about two months and then they disappeared.

Virginia Shostal.

Box 252, Hyas, Sask.

My sister and I started out for Dapp by car one day last fall. We decided to take a short cut through some brush. As we passed a farmer's place we saw a large coyote with a hen in its mouth running across the road. It did not hurry when it saw us. It just stood still while we drove up to it, then it jumped off the road and disappeared in the bush. Since that day each time we have travelled that road we have seen a coyote. Last time we saw two. The old-timers around here say, when the coyotes and rabbits become numerous, hard times are coming. If that is a sign, we are really in for it.

W. E. Durling.

Westlock, Alta.

My dog was jumping around and as I watched I saw him chasing a rabbit. The white rabbit was running for the bush in the deep snow toward a trail. Seeing this, the dog ran around the track where the snow was not deep and hid near the path the rabbit would take. Just as the rabbit came near the dog's hiding place, he leaped out and killed him.

Victor Kalischuk.

Grande Prairie, Alta.

One day my mother was sitting by the kitchen table reading. It was a warm summer day so the door was wide open. Suddenly she heard a strange scratching noise on the linoleum by the door and looked up to see a groundhog coming in. She was very surprised, so sat still to see what he would do next. He didn't seem to be very frightened because he came right in and went in the corner of the kitchen by the stove. Mother thought she would have some fun with the strange little visitor, so she took a screen off the window and locked him in

the corner. Then she got a dish of milk and put in with him. He came up to the dish and had a drink, then he seemed to get restless and tried to get out, so she got a heavy coat and put over him and took him outside again.

Betty Ann Foyd.

R.R. No. 2, Tofield, Alta.

Dad and I were going out to look at the cattle and saw two coyotes had a calf down. We returned home and got our five hounds and my next oldest brother. We took after the two coyotes. We went after one of the coyotes with the car and run him for about 1½ miles. He was just about all played out and we could not hold the dogs any longer. I was sitting in the back of the car and I opened the door. The hounds just gave one jump and all went out the door at once and took me with them. We were only going about 20 miles per hour, so I did not get hurt much because I fell on my seat. I ran and got in and just over the hill the hounds had the coyote.

Harvey Boyd.

Box 249, Armada, Alberta.

A couple of years ago we had some three orphan lambs. We also had a fresh Jersey heifer. Rather than bottle feed the lambs we tried letting them suck the heifer. They soon thrived on the Jersey milk, and the heifer mothered them perfectly. The lambs would only feed when in the cow's stall, and after they had finished I would take the balance of the milk from the heifer. They fed from her until they weighed 100 pounds each. At feeding time, the heifer would call them and they would scamper to the barn for their meal.

E. L. Beach.

We do not need an alarm clock. Every morning our cat wakes us up. He climbs on a window sill, knocks at the window pane with his paw and starts meowing. The meows are low at first. However, if no one gets up the meows become raucous and loud. The knocking is louder and continuous. We cannot sleep. One has to get up and let the cat in.

Mike Pikoch.

Lavoy, Alberta.

One day last fall my sister and I took lunch out to my Dad, who was working at a nearby granary. Our old mother cat and kittens followed us there. Just then we all saw a weasel get under the granary, so the cat stayed very still for awhile till the weasel came out, then

We had a pet pig and every time we rubbed her side she'd lay down. One day the pig got out of her pen and started chasing the geese. The gander started pecking its side. The pig was so fat that he thought it was playing with him, so he started to lay down on the gander. The gander just got out in time. The gander gave up and went away. We all had a good laugh.

Jerry Gould.

Northern Pine, Sask.

There's a weasel stays in our house and he drinks milk out of a saucer, and eats cooked oatmeal. Although he will run if you move towards him, as long as you stand still he's not afraid.

Joy Gould.

Pierceland, Sask.

One day when I was going for the cows, I saw a hawk drop a rabbit right in front of one of the cows. When she saw it, she jumped back right into a big badger hole and almost broke her ankle. She was sure wary of badger holes from then on.

Jerry Kerns.

Elnora, Alta.

I was going to the chicken-house and Mom told me to get the eggs, too. I just got to the door and a ground-hog came from under the chicken-house. I sure got frightened. I ran as fast as I could into the chicken-house. So then I got the eggs and fed the chickens, and ran to the house to tell Mom and Dad. Then they came to the hen-house and saw the groundhog kind of under the hen-house. Then Dad came with the gun and shot it.

Leona Schwitz.

Wondering River, Alta.

she pounced on it catching it by the throat and hind feet, and then killed it. She took it to the kittens who were waiting. Then an old red hen came and tried to get the weasel away, but the cats held on.

Karen Dudley.

Box 193, Stavely, Alta.

As I was finishing the chores I heard a noise, looked up and there were 25 cranes overhead, honking and circling around as if looking for nesting grounds in spring. It is the first time anyone around here has ever seen them this late.

Gilbert Germain.

Hazel Dell, Sask.

Routine. In Pacoima, Calif., halted by city police after a four-mile chase during which he allegedly committed 18 traffic violations (including speeding, making an illegal turn and running through a red light), Motorist William J. Stickler, 24, demanded: "What's the matter? I always drive this way."

High & Wide. In Downieville, Calif., anxious to get a county road-building job, Contractor George Miller flew over the county courthouse in a plane, dropped his bid in a weighted envelope five minutes before the deadline, but lost the contract because his bid was too high.

Life With Mother. In Wichita, Kans., Wayne Huttong was granted a divorce after testifying he worked nights, and never got any sleep during the day because his wife insisted on keeping 36 pet canaries and two dogs in the bedroom.



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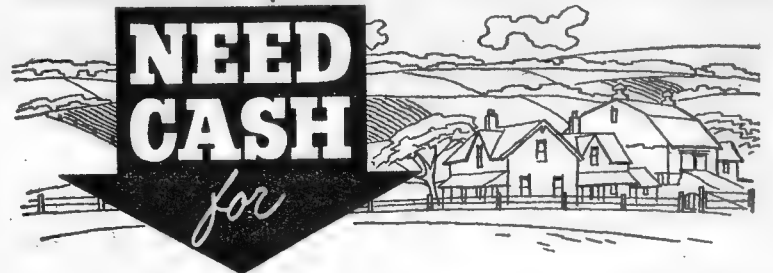
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WINNIPEG CANADA

CATTLE gains can not be maintained under heavy grazing, studies at the Stavely grassland substation have shown.

Grazing at the station has brought changes in vegetation and root systems. It is likely to cause erosion, R. W. Peake, forage crops head at the Lethbridge experimental station, told the 58th annual convention of the Western Stock Growers' Association in High River, February 11.

Mr. Peake, speaking on research at the substation, said that Creeping Red Fescue is one of the outstanding grasses tried

Here's the proof on over-grazing losses

By DICK BEAMISH

there. Crested wheat also is valuable in the foothills because of its drought resistance and its hardness.

The Stavely station consists of 1,000 acres of grassland upon which 90 head of cattle are being run to find the most suitable grazing rate and the effect of over-grazing on the vegetation, Mr. Peake said.

Pastures containing 12, nine, six and three acres plus a rotational grazing system at four acres per head for a six-month grazing season have been set up.

The experiments started in 1948 and in this "short terms" there have been no noticeable changes in vegetation on the 12-acre field, Mr. Peake said. Desirable grass species have maintained themselves. However, Idaho Fescue and Parry's Oatgrass have increased considerably at the expense of the

important Rough Fescue in the more heavily utilized field, he said.

"During these first few years of the experiment the general trend of the total amount of grasses has been on the increase, perhaps because of the favorable seasons we have had," Mr. Peake said. However, these increases have mainly been in the less desirable species. It is quite possible the three-acres-per-head field will turn to biennial and annual weeds.

Loss of vigor in plants due to heavy grazing is showing up and there is no doubt that if they are not permitted to store carbohydrates in the roots they won't be able to start normal spring growth, the speaker said.

Erosion Coming

Already a situation favorable to erosion is being created rapidly because of extensive grazing, trampling and loss of vigor in the root systems. This is particularly true in the three- and four-acre units, where trails and gullying have shown up. The same amount of trampling on moderately-grazed pastures has not exposed the bare ground.

Maximum gains have been put on cattle during the grazing season on the 12- and nine-acre units. However, the six-acre unit cattle are beginning to gain less each year and the three-acre group are barely holding their own. During the first two seasons, the three-acre group put on nearly as much weight as the others, but there was a marked drop in the third season, he said.

"It is quite evident that cattle gains cannot be expected to be maintained under heavy grazing conditions," Mr. Peake said. "To date there has been

no reduced calf weights due to heavy grazing. Any reduction in production is reflected in cow rather than calf," he said.

Part of the work at the station is finding grasses and legumes suitable for the foothills and ways of revegetation overgrazed or eroded areas.

Creeping Red Fescue has proved one of the most outstanding grasses, providing excellent grazing in fall and winter. It is fibrous rooted with strong, running roots capable of fighting both trampling and erosion. For this reason it is excellent for seeding steep slopes and areas subject to washing. It is good forage and also produces seed under foothills conditions.

Fescue Best

Brome is palatable and makes a good hay crop but yields go down after the first year or two and it does not withstand erosion as well as Creeping Red Fescue. Intermediate wheatgrass has a large seed and the seedling is quick to establish itself. It is very capable of holding soil and may have some merit for reclaiming overgrazed slopes, he said.

Timothy does well and provides a fair hay crop but is a poor winter pasture and encroaches on winter fields. Reed Canary Grass is outstanding on wet areas flooded for more than three weeks and has some tolerance to alkali. Crested Wheatgrass is the most drought-resistant cultivated grass and starts early in the spring. It resumes growth in the fall. Mr. Peake recommended seeding it on dry, sandy knolls.

Alfalfa grows exceptionally well in the foothills and is valuable for hay but should be used with caution for pasturing, he said.

Control of range weeds by herbicides, cultural practices and grazing management is being studied at the station. Buckbrush, or Western Snowberry, can be killed by spraying or dusting with herbicides. Studies are underway to find the best rates and times of application for weed control, he concluded.

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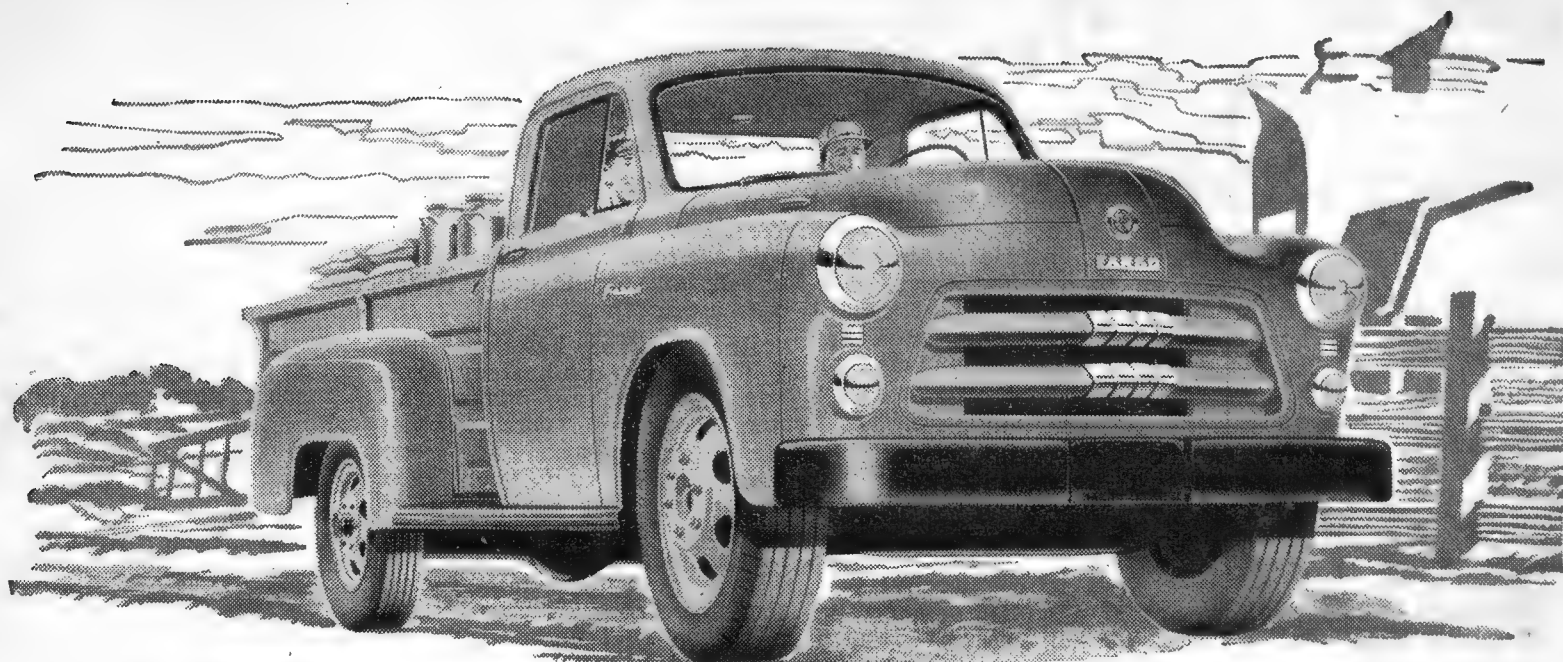
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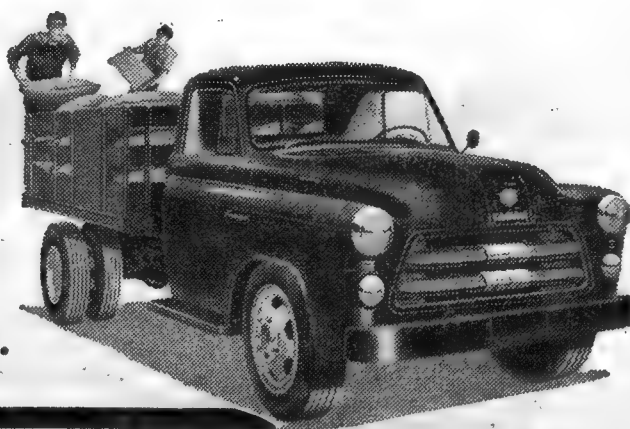
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The sins of the good

By DR. FRANK S. MORLEY, Ph.D. (Edin.) B.D.

NAAMAN was described as "a mighty man in valour, but he was a leper". Often we find in people of great capacity something which utterly destroys their effectiveness. Indeed all of us have faults, all of us are sinners. Augustine had a friend who hated his neighbor. The fellow was always giving him trouble. So Augustine's friend prayed. "O God, destroy this wicked man!" and God replied, "Which?" We all need mercy.

I once interceded with a powerful man to be merciful to a poor chap who had gone wrong. He asked me, "Why?" I replied,

*"Teach me to feel another's woe,
To hide the guilt I see,
That mercy I to others show,
That mercy show to me."*

I have known a great many people who believed themselves "good". Such people are both inside and outside the Church. Let us not argue about the word "good". You know what I mean: people who are strait-laced, exact, and who defy you to show any time they have stepped from the straight and narrow. I doubt that Jesus would call them "good", but that is another matter. They often have sins that are as repulsive as leprosy. Here are some of the sins I have found in the "good":

1. Thin-skinned.—Their feelings are easily hurt. They bleed at every pin-prick. The New York Times had a news item, "Collapses After Wasp Sting". The story told: "Joseph Szuminski, a workman for a construction company here, col-

lapsed to day after being stung by a wasp and had to be revived with adrenalin. Dr. Symons of Westbury, who attended him, said the man had suffered from anaphylaxis, or supersensitivity, a rare condition."

Rare? Where has the doctor lived? There are husbands and wives not speaking, friends who pass one another with noses in air, members who have gone from Church to Church, men who have quit position after position, lodge members who stay morosely at home, because they suffer from "anaphylaxis", that wretched hypersensitive condition that finds offense in every casual word.

Multitudes of people are always having their toes stepped on: their feet must be abnormally long. Here is a woman who took offense at something someone said about her cake and never comes to Church any more. Here is a man who was offended because someone criticized the way he ushered. He never comes any more.

2. Respectability. — Once Jesus was being entertained by a rich man named Simon. The house was filled with "good" people. So when a streetwalker came in and washed the feet of our Lord and wiped the feet with her hair in an agony of love and adoration because of her redemption, Simon, the respectable, and his friends looked askance at Jesus. He should have known she was a harlot and spurned her with His foot.

Then my blessed Lord spoke to Simon. Read the story yourself! It reveals the great heart of Him. This man had little use

for the "good" people. You find Him at a well-side with a much-married woman. Here He is with a madman. Here He goes to dinner with a thief. Here He calls a publican to be a disciple. He was nicknamed, "The Friend of Sinners", a nickname that is now our glory.

Dr. Coffin, once moderator of the Presbyterian Church in the United Church in the United States and head of a great theological college, said we suffered in the Church from middle-class respectability. True. But folk outside the Church do, too. "I am as good as people who go to Church". Respectable folk!

3. Sentimentality. — Often "good" people are foolishly maudlin in their response to situations. Jesus had a fine realism. When a woman began to go into ecstasies, "Blessed be the womb that bare thee", Jesus cut her short. "Yea, rather, blessed are they that hear the word of God, and keep it". When Peter made elaborate vows of loyalty, Jesus warned him, "Tonight thou shalt deny me thrice!" We read that, "He knew what was in man". He did indeed. Folk like Herod did not fool Him. "Go, tell that fox..."

I read one of those pious Sunday School stories of a little girl who said to her father, "Do you know, Daddy, what Jesus said to Judas when they met again?" The father waited for the childish wisdom. "He said, 'It doesn't matter, Judas'." Now the father thought that very sweet. What stupid sentimentality in which to educate a child! As if to betray a friend, to desert a cause, to destroy your life, and to commit suicide did not matter! Jesus thought it mattered. He said, "It had been better for that man that he had not been born!"

But parents are often foolishly indulgent. So Jacob spoiled Joseph outrageously. He praised him in such a way as to arouse the jealousy of his other sons. Then when they came back with an outlandish tale he believed them, although neighbors and friends must have hinted at the truth. "Not my sons!" I can imagine Jacob saying. Here is a man so shrewd in business, so sentimental regarding his family.

Such sentimentality is common enough. Many parents would never believe their sons could commit crime. A youth leader was praising young people to me at a High School gathering and there walked past us at that moment a youth who was on the way to Hell. Now no minister in this city has done more for youth than I have tried to do.

Potentially we have the finest generation of youth in our history and there are lovely, gracious young people. But if you say they are "all right", if you think they do not carry the possibility of utter destruction, you are blind. There is enough

Winter Feed

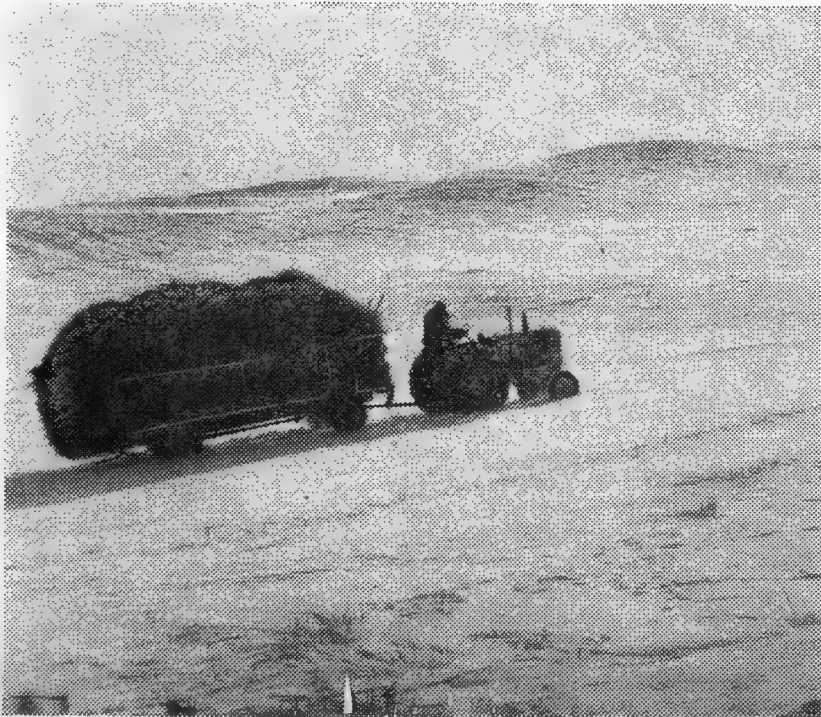


Photo by Richard Harrington.

original sin in any normal, red-blooded young man or woman to send them to Hell. Don't you forget it: your child, too!

Hutchins said of the President's commission on education, "Its heart is in the right place; its head does not work very well". So with many a parent and educator. Sentimentality is a sin. Be soft-hearted, but don't be soft-headed.

4. Censorious. — Jonathan Edwards was asked for the hand of his daughter in marriage. He refused. He did not think she would make a good wife! "But she is God's child!" "Yes", said Edwards, "But sometimes Almighty God can live with people we can't". Oh, so true!

So many "good" people are fault-finding, critical, complaining, censorious. A woman went to see the doctor about her husband. The doctor had given him a medical examination. Surely something serious must be wrong when he sent for her. "Your husband must have absolute quiet", said the doctor, giving the wife a box of pills. "And when do I give him the pills?" she asked. "Take them yourself", said the doctor!

How often as I have watched censorious people I have felt a sympathy for the little girl who prayed, "O God make all the bad people good and the good people nice."

The Bible is full of examples. Here is Jonah, the mean-tempered fellow, waiting for the destruction of Nineveh and in a scarlet peeve because the Lord did not bring it about. Here is Elisha, undoubtedly a good man, who gets angry at some children for shouting rudely at him, "Go up, thou bald head!" and has forty-two of them eaten by bears. Then when his faithful servant Gehazi, who doubtless was much underpaid if paid at all, took the money from Naaman which Elisha had refused, he gives the old man leprosy. I find it hard to like Elisha.

Paul at first was very censorious. But he lived to forgive Mark and make a friend of him. And Christ led him to write at last, "Love suffereth long and is kind. Is not easily provoked."

5. Fanaticism is another sin of "good" people. I fear fanatics. They have a partial truth — for no one has the whole truth — and they make the inquisitors of the world. They are bigots. They are intolerant. They make a virtue of cruelty. They stop the advance of truth.

Jonah was a fanatic: he wanted Nineveh destroyed. John was a fanatic: he wanted a Samaritan village destroyed. Paul at first was a fanatic. You read of him "breathing out fire and slaughter".

6. Complacency. Yet fanaticism, if one must choose, is preferable to complacency, a besetting sin of "good" people. They oppose new truth, too.

Thus Eliphaz accused his friend, "You undermine religion!" They have the corrosion of idleness and luxury. Thus Amos condemns them: "Woe to those that are at ease in Zion!" Of the man who retired from work saying, "Soul, take thine ease", Jesus said, "Thou fool!" Strong words for Jesus!

Complacent people are also self-righteous, like the Pharisee who thanked God he was not as the Publican. Complacent people lack enthusiasm, like the Church at Leodicea which was well-satisfied with itself. "Because thou art neither cold nor hot I will spew thee out of my mouth!" Complacent people are dull. The saint were never dull. They were always adventuring. They were dangerous people. They overthrew societies. In the Book of the Acts you read of riots and earthquakes.

I have never thought too highly of Isaac. In the first place he allowed his mother to choose his wife. But then he never did adventure greatly. There was no quest for righteousness, no search for new country. He has little to commend him. Indeed he was a most miserable coward. Just read his story in the Bible and see if you don't agree.

The truly great and good men have been exciting. You might have found them uncomfortable to live with, but never dull! Read about the adventure of Paul in the eleventh and twelfth chapters of second Corinthians. "I press on", he said. Paul surely did.

Well, these are some of the sins of the "good". Are they yours? For we are all sinners. We all live in glass houses. As Jesus said, "None is good same one; that is God." All of us need redemption.

"So let me draw you to the Great Forgiveness,

Not as one who stoops to save you;

Not as one who stands aside with counsel;

Nay, as one who says, 'I, too, was poisoned

With the flowers that sting, but now arisen,

I am struggling up the path beside you;

Rise and let us face the heights together!"

AUSTRALIA'S 1953-54 wheat crop is expected to be smaller than it was last year, according to the International Federation of Agricultural Producers.

Latest figures indicate a production of about 160 million bushels this year compared with 193 million last year. A crop of the size indicated would provide Australia with about 80 million bushels available for export. This supply would provide Australia with enough wheat to fill its International Wheat Agreement commitment.

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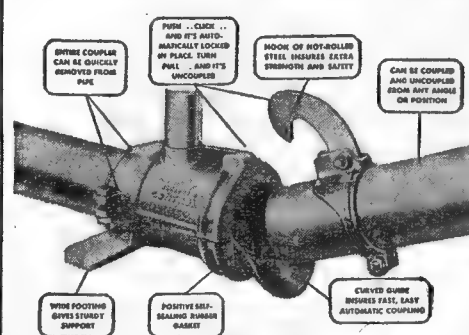
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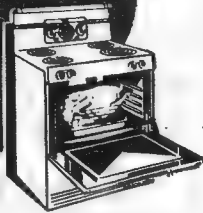
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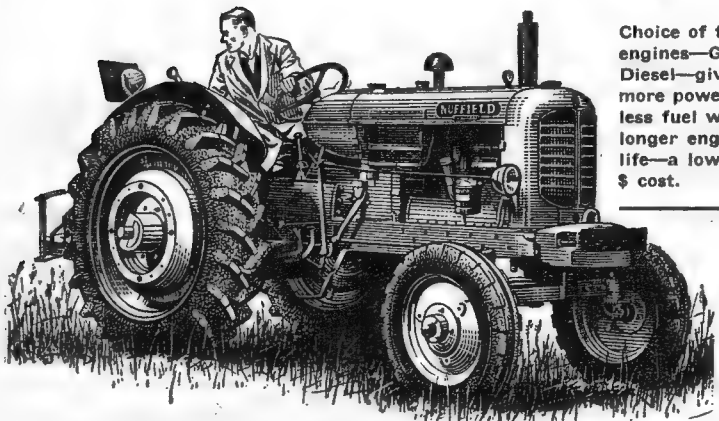
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Courses in Poker!

To the Editor:

Have been reading your editorials on our educational system with a great deal of interest and concern, particularly since we have a girl at school in Grade V with whose progress we are not particularly happy.

Saw some of her work and exercise books lately and can't make much sense out of them, but, after all, I'm only a farmer.

Am beginning to wonder if the Department may not be regaining some reason with the proposition of training high school students for three weeks to become teachers. Some of the best teachers I know didn't have any more training.

One of the projects you haven't mentioned was school children learning how to conduct lotteries and play poker. Perhaps the next will be on how to pass the crock.

At the moment I'm not sure what can be done about it, but I would like to know where I can obtain Dr. Hilda Neatby's book, "So Little for the Mind".

David C. Elford.

Foremost, Alberta.

Feeding Tips

To the Editor:

I was reading the article, "Don't sneer at old-fashioned remedies," in the February Farm and Ranch Review, and note he says the potato has not been fully investigated.

Here are a few uses for the lowly potato that I have found very good:

First, let's take poultry, they relish a few potato peelings in winter, or if kept penned in a yard, and they act as a regulator where dry grain is fed, also small potatoes boiled whole and mashed, then mixed with ground grains, is an ideal fattener for cockerels, use the water, too.

Next, for pigs, if you have runts or unthrifty pigs, just try boiling a few potatoes, skins, too; mash and add to milk once a day, you'll see the difference in a week. Keep it up until the hair looks smooth and silky. We buy up our neighbor's runts and scrubs and always get an "A" grade when we sell them.

Now for cattle, if you'll save all your small and sunburned potatoes and feed one pail of cut-up potatoes once a day for a week, or to 10 cows, two every month of winter weather, you will find it an ideal regulator, and your calf crop will profit by it when born. Hoping this will

be of some use, too, in getting back to the old remedies that are not only at hand on most farms, but also much healthier and cheaper than drugs, chemicals, etc.

P.S.—In using boiled potatoes always use the water they were boiled in also.

(Mrs.) W. A. Roffey.

Kinusa, Alta.

Socreds and Tories

To the Editor:

Differing with you in re—Socialism—I still think that Farm and Ranch editorials are amongst the best—if wielding cudgels for the farmer—is used as a base for appraisal.

Socreds howl when the truth is told—they so seldom use it—except as you point out—in small print—or as nuclei for a mountain of "we done it" poppy-cock.

As a resident of Peace River Fed. Cons. I would say to Mr. Daoust Solon Low was—rejected—by over 60% of us, and, as shown by Red Deer by-election—without Conservative support—Social Credit would ere now be well on the way not to Ottawa, but to where it belongs—oblivion.

May I echo Mr. F. F. Cameron's letter of approval, your editorial, as well as his biting reference to—Christian imposters—strip them of the support they get through that mumbo-jumbo—and, with Pro-Cons. taking the bit-in-their-mouths we'll see an inglorious fadeout of that fake party.

George Le Marquand.

Rycroft, Alta.

Lost Needle

To the Editor:

The February edition of the Review contains an article entitled "Is Freemasonry an Enemy of the Christian Church?" by Dr. Frank S. Morley, whose sermons I have always enjoyed reading, but there is one statement in this article that is incorrect and that is where he states that Cleopatra's Needle was placed in Central Park, New York, in 1878. The true history of Cleopatra's Needle is this: it was presented to the British Government by Memahat Ali in 1819, and was brought to London in 1878, where it stands on the Thames embankment. I remember seeing it there when in London during the first World War.

I trust Dr. Morley will not mind my pointing out this error

J. Garfield Baker.

Bittern Lake, Alberta.

Gas Exports

To the Editor:

I did not take part in the controversy with regard to the export of natural gas from Alberta. It was pretty well a foregone conclusion what the policy of the provincial government would be in view of the pressure being applied for export by the friends of the administration among the large corporations. Now that the decision to export has been announced, it would seem to me as a farmer, that those administrative bodies concerned, that is, the Federal Government and Provincial Governments of Alberta, Saskatchewan, Manitoba, Ontario and probably Quebec, should give very careful consideration to the ownership and operation of the proposed gas line and distribution facilities.

I suggest that here is where the principle of public ownership should be applied because there is such a large undertaking involved with respect to so many diverse interests. There is, first, all of us citizens who presumably own this gas in the first place. We don't want it all burned up as quickly as possible. Our children might need some of this valuable element. This is an exploitable resource, and an empty, rusty gas or oil pipe sticking out of the ground does not pay any taxes and before very long we will see lots of them.

Then there are the companies, large and small, who have drilled. They are entitled to some reasonable return. There are the communities and provinces through which this line will pass. They need and want the product, and finally, there are the people who will burn the product. Last, but not least, and who must be first in priority, are the consumers, both industrial and domestic, in Alberta and Saskatchewan.

J. K. Sutherland.

Hanna, Alta.

Likes Editorials

To the Editor:

I would like to congratulate you on the stand you have taken in your Editorials dealing with margarine and also on the matter of present-day trends on Education of our youth.

With regard to margarine, could you go farther and obtain a percentage of the prevalence of polio in non-using provinces in Canada and compare that percentage of its prevalence in provinces allowing the free use of this excuse for pure butter.

Dr. Frank S. Morley should be thanked for what you call "Sermon". His remarks are right to the point, and should prove of use to Masons and Non-Masons alike.

Wm. J. Brady.

Edberg, Alta.

Wrong Business

I HAVE just read your editorial on margarine. For some time I have been reading like criticisms, and, being an ex-dairymen, it seems to me the experiments in calf feeding are not the answer. We are dealing with butter and margarine.

There are various ways of testing one against the other. Why not use a number of rats of various ages, enough to make a thorough test, and feed butter and margarine to them on bread as we use it.

It is not vegetable oils in their effect on calves in various combinations that concerns us. The only test that is of value to us as human users of both products, is to feed animals of like digestive process, and note the difference, if any.

Why dairymen want to stay at a job that has never paid its way has always been a mystery to me. There are other branches of dairying which do pay, and add much more to the health and enjoyment of the consumers.

It might pay many farmers better to grow oil-producing vegetables. Maybe they wouldn't have so much to crab about.

A. A. Derrick.

105 Tranquille Road,
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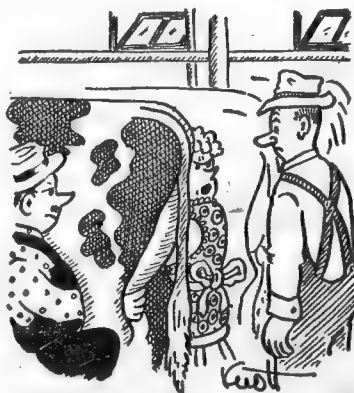
Notable Service

To the Editor:

I heartily agree with your editorial, "Bring foreign policy down from the clouds", stemming from, and dealing very constructively with, a recent statement by George H. McIvor, Chief Commissioner of the Canadian Wheat Board, to the United States Tariff Commission. I read that 4-column condensation of this latter submission in your December issue; feel like complimenting all concerned with same, and consider its inclusion a notable service to agriculture and to your readers.

Walter P. Davisson.

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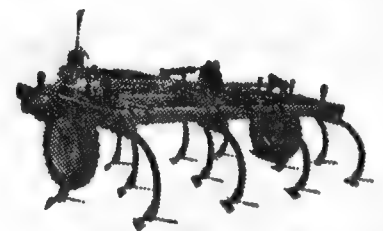
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A "Horse Trade" in the water fight

By C. FRANK STEELE

A BREAK is seen in the "Cold War" that has been in progress for several years between Canada and the United States over the waters of two international rivers — the Waterton and Belly.

These rivers rise in Montana and flow into Alberta and the allocation of the water of the streams is now before the International Joint Commission, which handles disputes of this sort. It was this tribunal that divided the waters of the Milk and St. Mary Rivers, also international streams, many years ago by treaty.

Both Canada and the United States want this water for irrigation purposes and exhaustive claims have been placed before the I.J.C. Now there is a demand on both sides of the border for an early adjudication of the question as the delay is holding up irrigation and water storage projects.

Connected with the I.J.C. is an advisory board made up of U.S. and Canadian engineers. These experts have made a lengthy study of the problem and recently a joint meeting of the committee was held in Great Falls, Mont., when an agreement was reached with the Canadian proposal, it is understood, accepted. Further study on the plan found acceptable by the engineers has since been given in preparation for placing it before the I.J.C. which will make the final ruling.

Canadian engineers have made no disclosure of the details of the formula accepted by the advisory board, but Montana sources indicate Canada has won its case and that this country will get the flow of the two boundary streams, needed for the maximum development of the half-million-acre St. Mary-Milk Rivers project in Southern Alberta.

It was in 1952 that the I.J.C. engineering committee was asked to study a Canadian proposal as a basis for the solution of the "water war" issue. This plan suggested letting Canada keep the Belly and Waterton Rivers and allow Montana to capture its waste flow from the St. Mary River in Canada and divert it back into northern Montana, together with some additional Canadian water, probably from the giant St. Mary dam, southwest of Lethbridge, and now completed.

Montana State Engineer, Fred Buck, has stated that this plan formed the basis of the agreement reached at the Great Falls talks. Buck sat in at the conference. About 88,000-acre feet of excess water from the St. Mary would be diverted into the north Montana plains under

the scheme. No great engineering works would be necessary.

This plan was advanced as it was maintained by Canadian experts that the United States would not be able to use the water of the Belly and Waterton which flow into Canada behind rugged mountain walls. The cost of tunnelling through the mountain barrier and building the necessary canals, it has been estimated, would be an estimated \$120,000,000 or more — much more, in the opinion of some. Some American authorities have said Uncle Sam would hold its water right in this dispute even if it meant the costly tunnelling job on the grounds that the water originates on their side of the border.

It is now believed that Montana, which is most interested from the American point of view, will rest its case by pressing its claim to the two rivers only to get more water from the St. Mary River, which is more accessible.

In other words, it now looks like it will be a "horse trade" in this long controversy, and that before too long the International Joint Commission will announce its decision.

These streams in southwestern Alberta are part of the great Saskatchewan River system fed from the eastern watershed of the Rockies. The water of this river system is imperative to the reclamation program of Canada not only in Alberta, but also in the working out of the proposed South Saskatchewan River project recently reported on by a royal commission and which it is still a major issue.

World Championships For Alberta

THE Province of Alberta won five world championships at the Royal Winter Fair at Toronto recently.

Ronald Leonhardt of Drumheller won the wheat championship with a variety Marquis. He was also winner last year.

Thomas Rhatigan of the Edmonton district won the oats championship with a sample of Victory oats.

George Snow of Milk River took the barley championship, his exhibit being Campana.

Chris Morick of Dickson took the rye championship.

Thomas Corlet took the forage seed championship with a sample of Alsike clover.

Exhibitors from this province have created a reputation for Alberta agriculture which has out-classed all other Canadian provinces.

Meteor's ahead all ways!



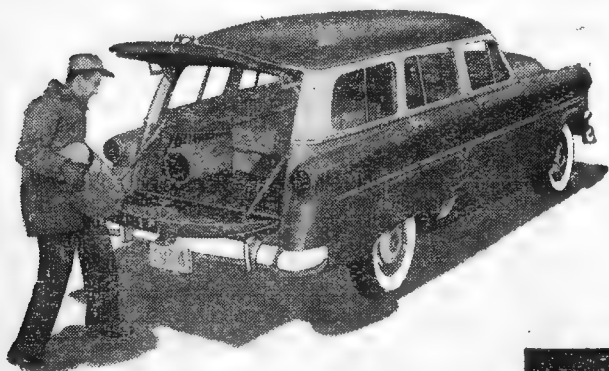
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AHEAD WITH THRIFTY PERFORMANCE!

Powered-ahead Meteor is the performance-leader in the low price field. Rideau and Niagara models offer a new 125 Hp. V-8. This exclusive engine is built by Ford of Canada—the Company *with more experience in building V-8 engines than all other makers combined*. Here's famous V-8 dependability, smooth efficiency and long engine life, matched with brilliant economy of operation.

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Meteor's advanced-design "Wonder Ride" provides the smoothest ride ever offered in its field. On bumpy roads, vibration and wheel shocks are absorbed by massive Hydra-Coil springs—you enjoy a far smoother, softer, quieter ride than ever before. See your Meteor Dealer about trying this improved riding comfort for yourself!

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Powered ahead—
Be miles ahead with*

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1. Seed down to moisture without covering the seed too deep . . . no dry soil or stubble is worked in with the seed.
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NOBLEFORD ALBERTA CANADA

What does your handwriting reveal?

Are you a natural-born salesman or would you make a better mechanic? Have you got hidden talent for art, cookery or stenography? Would you be interested in getting the verdict of an expert on the character your handwriting reveals?

The Farm and Ranch has arranged with Mr. David Meyer, the author of this new and regular feature of the Farm and Ranch, to analyze the handwriting of its readers. Here are the rules:

Write at least 12 lines with pen and ink on good paper. Do NOT — repeat — NOT use a ball-point pen or pencil. Send it together with 25 cents in coin: —

DAVID MEYER.

7½ Jane St., New York City, New York, U.S.A.

Do not send stamps and always enclose a self-addressed envelope.

Henry Ford had a mechanical "hand"

By DAVID MEYER

*Small factories
in the country
will make*

THE above specimen was written by Henry Ford and is as good an illustration as any of the characteristics that combine to make a good mechanic or machinist.

A man handy with tools must be matter-minded, with a good feeling for concrete things. The long lower projection of the let-

ter "y" in the word "country" tells us that.

He should have a good eye for details. Note that the letters "i" and "t" are carefully dotted and crossed.

He should be patient with his tools and materials. Our specimen was written slowly, deliberately, carefully.

There should be a love for sheer physical activity. This trait is expressed in the heavy pressure, showing energy and the will to do.

Note the angularity of the "w" in the word "will". It is our old friend the angle, indicating purposiveness and tenacity.

Note also the rounded letter "m", the so-called arcade formation. This attests to technological interest and ability.

Observe also that the strokes are firm. This indicates good muscular co-ordination.

Such writing also tells us that the writer was not much interested in aesthetic appearances, but in practical results only. The "beautification" of the Ford car much later, and other men were responsible for the car's looks.

Henry Ford's writing also shows a capacity to keep financial books and handle money. These characteristics are revealed by the narrowness of the writing, the letters being formed close together.

He was a modest man, more at home in his workshop than in public gathering places. The small capitals and the simplicity of the writing tell us that.

And he could be as stubborn and tenacious as brass. The angle and the stiff-looking letter "y" point out these traits.

chinese gongs

The above specimen was written by an architect. It could also have been written by an expert cabinet maker, furniture designer, interior decorator.

Observe the letter "g" in the word "gongs". It's quite fancy, elaborate, highly individual. It

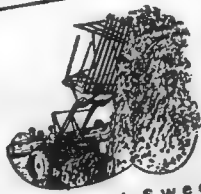
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Extension Boom and Grapple for handling Hay, Straw, etc.



Stacker and Sweep Rake for hay, straw, etc. Push-off, hydraulic action.



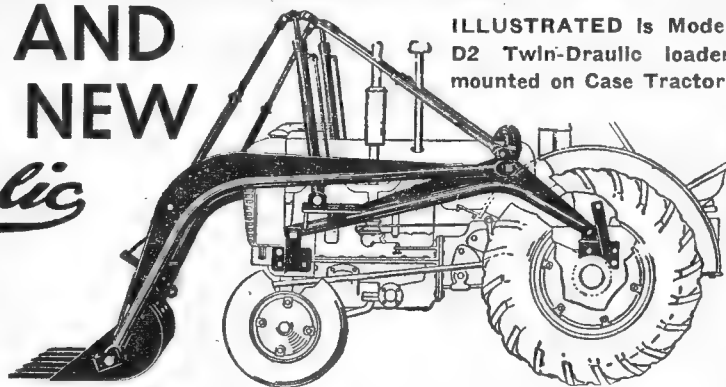
Dozer blade for grading, filling, clearing roads, etc.



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Teamed up with your tractor a Twin-Draulic loads manure, stacks or carries hay and straw, clears roads, shovels grain, dirt or other loose material.

All year round this highly-efficient hydraulic loader helps your tractor pay additional dividends in lifting, shoveling, loading, grading or filling ditches. Easily mounted or unmounted by one man. The only loader with patented adjustment for height and power — powerful, fast and dependable. Built for heavy duty work with instant tractor-seat control.

Send for complete specifications. Your Twin-Draulic Dealer welcomes the opportunity to give you a demonstration. He is as close as your nearest town.

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Please forward, at no obligation, literature and details on Twin-Draulic Loaders to:

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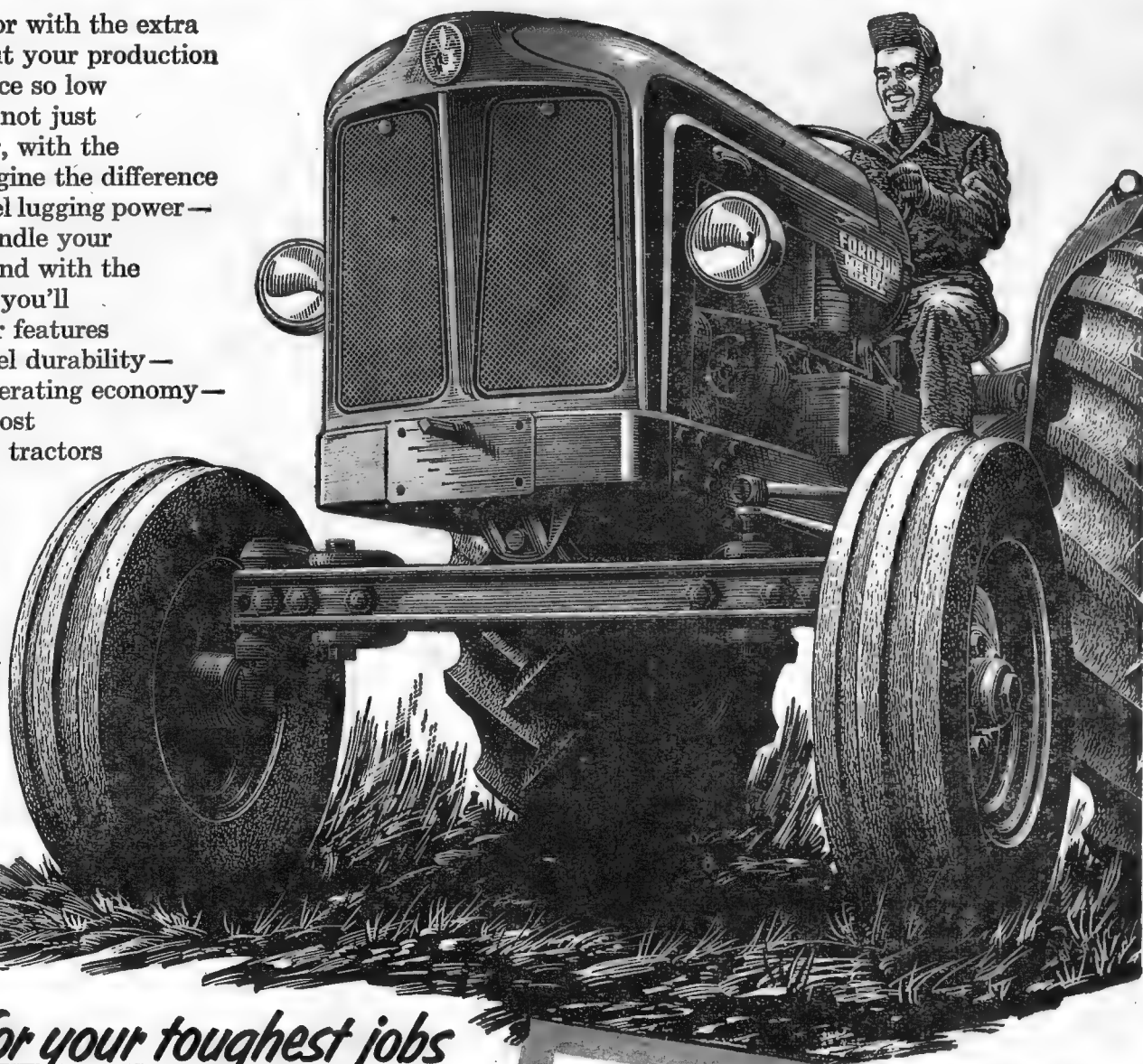
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FORDSON MAJOR DIESEL

Now you can have a tractor with the extra power you've wanted to cut your production costs—and have it at a price so low you'll be amazed. And it's not just "power"—it's *diesel* power, with the *Fordson Major Diesel*. Imagine the difference on your farm with real diesel lugging power—full 3-4 plow power—to handle your heaviest work with ease. And with the big Fordson Major Diesel, you'll have all those other tractor features you've been wanting—diesel durability—diesel simplicity—diesel operating economy—at a price even less than most similarly equipped gasoline tractors in the same power class.



POWERED *for your toughest jobs*
DESIGNED *to cut your farm costs*

A full diesel, the Fordson Major Diesel is building a country-wide reputation as a farm "power plant" without equal. In recent official tests, the Fordson Major Diesel—weighing 7890 lbs. on 14 x 30 tires—produced 5315 pounds maximum sustained pull. As for operating economy, just look at these figures. First, the Major Diesel uses up to 50 per cent less fuel than a comparable gasoline tractor. And then, diesel fuel costs about 20 per cent less than gasoline in most areas. Now figure how much you would save on your own operation. A Major Diesel on your farm will mean *more work done, at far less cost.*

- NEW OVERHEAD VALVE ENGINE (Direct Injection Type)
- 6 SPEED TRANSMISSION (6 Forward and 2 Reverse)
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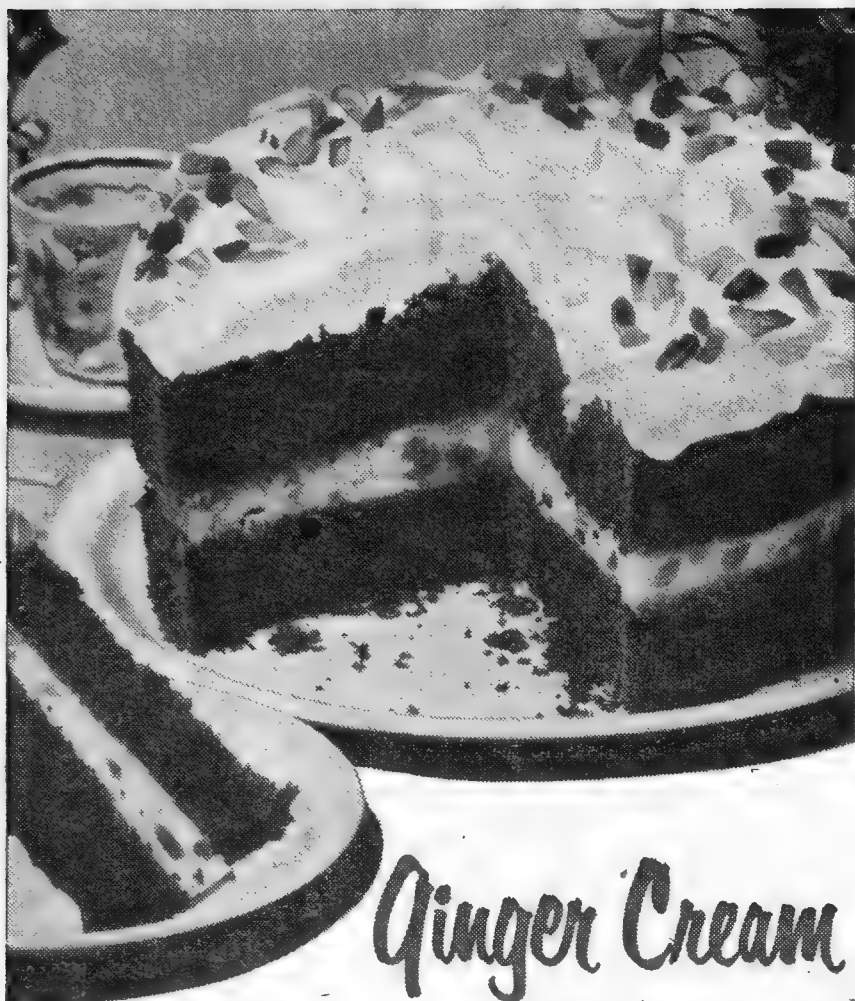
GENUINE FORD AND FORDSON MAJOR TRACTOR PARTS AND EXPERT SERVICE AVAILABLE EVERYWHERE IN CANADA.

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GET THE FACTS!
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Ginger Cream DEVIL'S FOOD

Bake it with MAGIC and serve it with pride!



● Sit serene in your accomplishments, Madam! You know the thrilled comments on your cake making are merited—for *you* planned and baked this magnificent Magic dessert cake *all yourself!* You know its velvet-rich texture and sumptuous flavor will match its triple-toned beauty—thanks to Magic Baking Powder!

Smart cooks wouldn't dream of being without Magic—for that touch of sure perfection in everything they bake. Magic's dependability insures your more expensive ingredients—yet costs less than 1¢ per average baking.

GINGER-CREAM DEVIL'S FOOD

- ½ cup cocoa
- 1½ cups fine granulated sugar
- 1½ cups milk
- 2 cups sifted pastry flour
- or 1¾ cups sifted all-purpose flour
- 3 tps. Magic Baking Powder
- ½ tsp. baking soda
- ½ tsp. salt
- 9 tbsps. butter or margarine
- 2 eggs, well beaten
- 1½ tps. vanilla

Grease two 8-inch round layer-cake pans and line bottoms with greased paper. Preheat oven to 350° (moderate). Combine cocoa and ¾ cup of the sugar in a saucepan; gradually blend in ¾ cup of the milk; bring to the boil, stirring until sugar dissolves; cool thoroughly. Sift flour, Magic Baking Powder, baking soda and salt together three times. Cream butter or margarine; gradually blend in remaining ¾ cup sugar. Add well-beaten eggs part at a time, beating well after each addition. Stir in cold chocolate mixture. Combine remaining ¾ cup milk and vanilla. Add flour mixture to creamed mixture about a quarter at a time, alter-

nating with three additions of milk and vanilla and combining lightly after each addition. Turn into prepared pans. Bake in preheated oven 40 to 45 minutes. Cover one layer of cold cake with the following Ginger-Cream Filling; let stand about ½ hour then cover with second cake. When filling is set, top cake (or cover all over) with whipped cream; sprinkle with toasted sliced almonds and chopped ginger and serve immediately. Or cake may be topped with any desired frosting.

GINGER-CREAM FILLING: Scald 1½ cups milk and 2 tbsps. cut-up preserved or candied ginger in double boiler. Combine ¼ cup granulated sugar, 2½ tbsps. corn starch and ¼ tsp. salt; slowly stir in milk mixture. Pour back into pan and cook over boiling water, stirring constantly, until smoothly thickened; cover and cook, stirring occasionally, until no raw flavor of starch remains—about 7 minutes longer. Slowly stir hot mixture into 1 slightly-beaten egg; return to double boiler and cook over hot water, stirring constantly, for 1 minute. Remove from heat; gradually stir in 1 tbsp. butter or margarine and ¼ tsp. vanilla. Cool this filling thoroughly before spreading on cake.

Eat those Easter eggs!

By LOUISE PRICE BELL

IN almost every home where there are children, eggs are colored for Easter. This means that after the Easter egg hunt is over mother is in something of a dilemma as to how to use up so many eggs and still keep the meals interesting. It's no fun to munch away on plain hard-cooked eggs day after day, as we all know. So here is one way to use six of the eggs and at the same time give the family a good and nourishing main dish.

Scalloped Eggs and Ham
3 tbsps. butter

- ¼ cup flour
- ½ tsp. salt
- 2 cups milk
- 6 hard-cooked eggs, sliced
- 1 cup cubed, cooked ham
- 2 cups corn flakes
- ¼ cup melted butter

Melt butter, stir in flour and salt, then add milk slowly and stir until thick. Arrange alternate layers of eggs and ham in greased casserole and pour cream sauce over. Crush corn flakes and mix with melted butter, sprinkle over cream sauce. Bake in 350° (moderate) oven about 25 minutes.



An idea for Easter

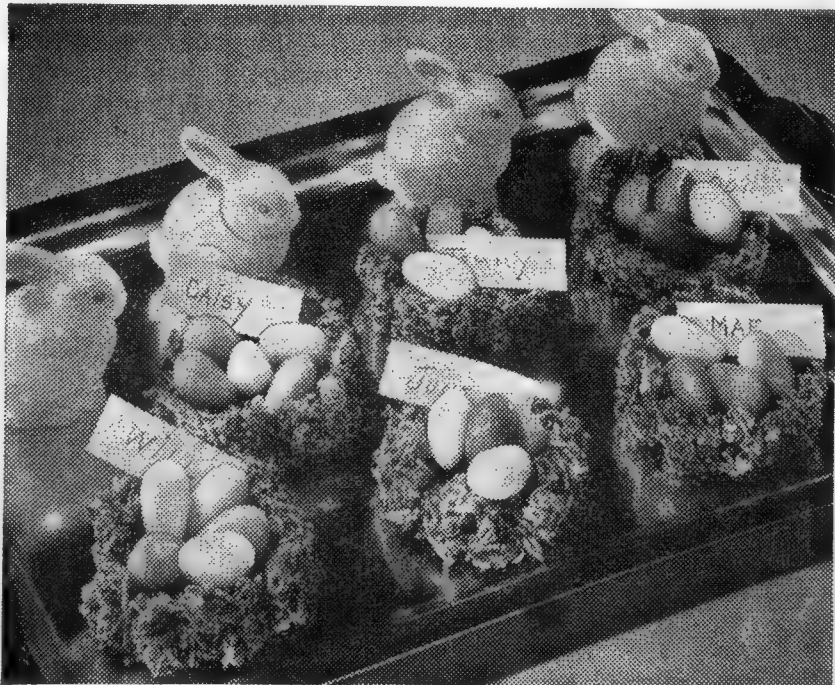
By LOUISE PRICE BELL

LET the youngsters make realistic-looking nests for colorful candy Easter eggs, especially if they are going to have some friends in, or are having a party. This is a very inexpensive thing to do and since the nests can be eaten afterward, there is no waste.

To make the nests mix ½ cup of brown sugar, ½ cup of white sugar, ½ cup of dark syrup and 1 tablespoon of butter with 6 tbsps. of water. Cook, stirring until the sugar is dis-

solved then continue cooking until a little forms a firm ball when dropped into cold water. Remove from fire, stir in 2¼ cups of corn soya (or corn flakes) and drop with a tablespoon on a greased surface. Shape quickly into nests and when firm and cold fill with candy eggs.

These make good place cards at a children's party and a card with each child's name on may be inserted in the top of each nest.



Just this morning I was thinking of a child's party that I attended (?) years ago and one little boy guest after wiping the cake crumbs off his mouth remarked with a little old-man air, "My that is a lovely cake ... could I have the recipe?"

I still remember how the hostess and her lady friends laughed and remarked, "It takes a little kid to get away with that."

We have all tasted certain foods at parties and longed to ask the hostess for the recipe ... but feared she would think us ill-bred for doing so. Now we can't come right out point blank like the little boy did, but I don't see anything wrong in complimenting the hostess afterwards and it has been my experience that in nine times out of ten she volunteers to share her recipe.

I've been collecting many recipes for you that way during the past two months. Two of them were for pickles that were new to me ... and, oh, so yummy good. One of them was for pickled grapes ... ever heard of them or tried them? I hadn't, but I certainly am going to try them later on. I've filed all these recipes away for all you friends and you keep your eye peeled on this page and you'll see them in proper season.

One of you wrote me that when you used the oil of dill in your pickles last fall it was so tasteless they were nothing

Aunt Sal Suggests . . .

more than sour pickles. Oil of dill is one of those things that evaporates very easily, so, when not in use, you must seal the cork very tightly. Either dip the top in parawax or cover it with several layers of adhesive tape. I've had the same bottle for two years now, and it was still plenty strong. I was real happy over the results of my dill pickles the past two years since I started using oil of dill instead of the dill plant. I put down about three times as much as we needed for our own use and then I had these extra jars to give to friends who hadn't any in their cellars.

I would hardly call a jar of pickles a "sweet gift" would you . . . but if you wrap it

prettily and hand it out with a smile, it will be gratefully received, I'm sure.

If I don't get off of this sour subject you'll feel your mouth is all puckered up. So now I'll give you the antidote and talk about candy. Here is a recipe that I've tried several times throughout the winter months and, oh, how we liked it. And it hasn't that sickly sweetness that so many home-made candies have that make one want to have a glass of water right handy.

Never Fail Creamy Fudge — (Came originally from Mrs. F. M., Ioco, B.C.) 2 cups brown sugar, $\frac{1}{4}$ tsp. salt, 3 tbsps. flour, $1\frac{1}{2}$ tsp. baking powder, 2 tbsps. butter, 1 tsp. vanilla, $\frac{1}{2}$

cup nuts (optional), $\frac{1}{2}$ cup milk.

Method: Mix sugar, flour, salt, and baking powder together. Stir in milk. Place over heat and when sugar is dissolved add butter. Boil slowly until soft-ball stage is reached. (about $\frac{1}{2}$ hour). Take from heat and add vanilla and nuts (or scatter nuts on top afterwards). Let cool first before beating. Beat until thick and pour onto buttered plate.

Note: This does not make half enough. I followed directions to the letter the first time and next time I doubled the recipe. Ill bet you will, too.

Just because I mentioned in the December issue that I had been "enjoying" a spot of poor health the past year, it really touched me the number of letters that came in expressing sympathy and hoping that I was going to be able to carry on with this column. I thank you all for these friendly overtures. Thank you, I'm feeling fine and I'll let you in on a secret, "If I had to give up this work I'd miss it just as much as you would." Mind you, there were even two men wrote in and inquired about my state of health. When I told that to Oscar, he exclaimed: "I think I'd better start reading your mail." I just motioned to the stack before me on the desk and replied: "Hop to it, big boy."

Bye bye for now . . . and every good wish.

The Dishpan Philosopher

THE Pollyanna line of thought, that sometimes seems to help a lot by digging out odd bits of cheer from situations drab and drear, can easily be overdone and put ambition on the run. I think we ought to try to wrest from life the utmost and the best, and, where we have a choice, elect to battle fortune and reject temptation to sit back and nurse content because things might be worse. Sometimes, of course, fate takes a hand and deals us blows we can't withstand, but, by and large, through thick and thin, we shouldn't hurry to give in.

I don't know how this dishpan could contrive to get me in the mood to give you such a solemn spiel, but just right now it's how I feel. And I would say in its defence it preaches just plain common sense.

3 tempting whole-wheat varieties from One Basic Dough!

NEEDS NO REFRIGERATION



Make these treats with new fast-acting Dry Yeast

If your family enjoys whole-wheat bread, give them not one but three treats next time you bake! See how Fleischmann's Fast Rising Dry Yeast helps you to serve a variety of tempting things with no extra trouble. When you bake at home, make sure you have Fleischmann's on hand.

Basic WHOLE WHEAT Dough

Scald

- $3\frac{3}{4}$ cups milk
- $\frac{3}{4}$ cup granulated sugar
- $4\frac{1}{2}$ teaspoons salt
- $\frac{1}{2}$ cup shortening

Remove from heat and cool to lukewarm. In the meantime, measure into a large bowl

$\frac{3}{4}$ cup lukewarm water

1 tablespoon granulated sugar

and stir until sugar is dissolved. Sprinkle with contents of

3 envelopes Fleischmann's Fast Rising Dry Yeast

Let stand 10 minutes, THEN stir well. Stir in lukewarm milk mixture.

Stir in

- 6 cups whole wheat flour
- and beat until smooth and elastic; work in 4 cups more (about) whole wheat flour

Turn out on board sprinkled with whole wheat flour and knead dough lightly until smooth and elastic. Place in a greased bowl and grease top of dough. Cover and set dough in a warm place, free from draught, and let rise until doubled in bulk. Turn out dough on lightly-floured board and knead 10 minutes. Divide into 3 equal portions and finish as follows:



1. WHOLE WHEAT BREAD

Shape one portion of dough into a loaf and fit into a greased loaf pan about $4\frac{1}{2}$ by $8\frac{1}{2}$ inches. Grease top. Cover and let rise until just doubled in bulk. Bake in moderately hot oven, 375° , 35 to 40 minutes, covering loaf with heavy brown paper after first 15 minutes of baking.

2. PAN BUNS

Cut one portion of dough into 16 equal-sized pieces. Shape each piece into a smooth round ball and arrange in a greased 8-inch square cake pan. Grease tops. Cover and let rise until

doubled in bulk. Bake in moderately hot oven, 375° , about 30 minutes, covering buns with heavy brown paper after first 15 minutes of baking.

3. SALAD OR WIENER ROLLS

Cut one portion of dough into 12 equal-sized pieces. Shape each piece into a slim roll 4 to 5 inches long. Place, well apart, on greased cookie sheets. Grease tops. Cover and let rise until doubled in bulk. Bake in moderately hot oven, 375° , about 20 minutes. Split rolls and fill with salad or heated wieners.

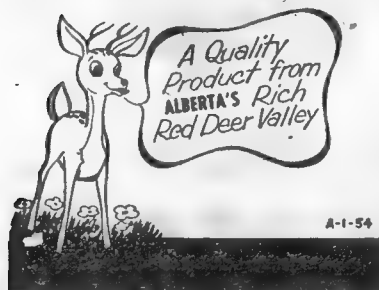
HERE are favorite ways to fix standing rib roast, round steak and — for a change — pork loin. You could almost say "eeny-meeny-miney-mo" and be pleased with the recipe you select . . . in fact, you will want to try them all, we are sure!

Every housewife knows that round steak is tops for flavor and an economical cut, and if you prepare it in this "special" way, you'll do it over and over.

For Better Baking!



Ask any cook! The success in baking is careful blending. Wise homemakers use ALPHA in their baking . . . it's creamy . . . ready for blending . . . tastier, too.



BACKACHE May be Warning

Backache is often caused by lazy kidney action. When kidneys get out of order, excess acids and wastes remain in the system. Then backache, disturbed rest or that tired-out and heavy-headed feeling may soon follow. That's the time to take Dodd's Kidney Pills. Dodd's stimulate the kidneys to normal action. Then you feel better—sleep better—work better. Get Dodd's Kidney Pills now. 51

Which shall it be?

By LOUISE PRICE BELL

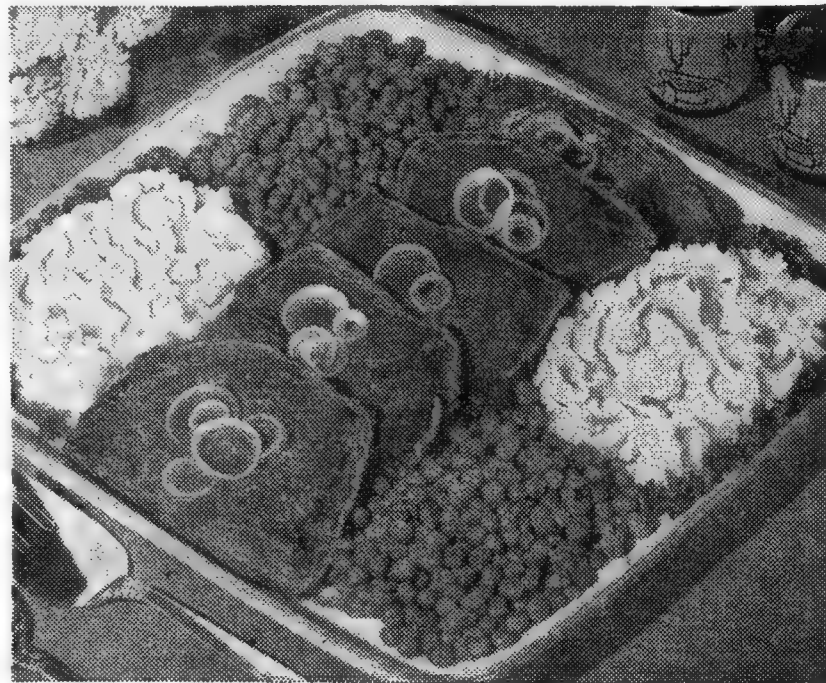
Round Steak Special

- 1 lb. round steak, ½ inch thick
- Salt, pepper, flour, lard
- 1 cup sliced onions
- 2 cans (8 ozs.) tomato sauce (or equivalent home-made—16 ozs.)
- 2 tbsps. soy sauce (not necessary, but it adds a lot)
- 1 tbsps. sugar
- 1 bay leaf
- ½ tsp. herbs of your choice (thyme, basil, majoram)

Sprinkle steak with salt, pepper and flour; pound on both

sides with edge of heavy saucer. In large, heavy skillet or Dutch oven brown steak well in hot lard, top with sliced onions. Combine tomato sauce with rest

Standing Rib Roast is easy to prepare and a perfect choice for guests. You may have a certain way you prepare yours, but those who don't, or for brand-new housekeepers, try doing it like this: Season the roast with salt and pepper then place —fat side up — in a shallow



Round Steak Special may be prepared in one piece, or cut into individual serving pieces, then served with vegetables.

of ingredients and pour over the meat, cover and cook over low heat until tender, about 1½ hours. Add water as tomato sauce cooks away. It's a good idea to cut the steak into as many pieces as there are people to eat it, then serve in center of platter, with fluffy mashed potatoes and buttered peas.

roasting pan, with no water and no cover. The roast need not be basted during cooking; roast in a 325° F. oven, using this time schedule — 22 minutes per pound for rare, 26 minutes for medium, 30 minutes for well done with temperatures at 140, 160 and 170 respectively.

Pork Loin Roasts are many family's choice for Sunday dinner, but do you ever barbecue it? If not, you have a real treat on hand. Loosen the backbone from the roast, then place it (roast) fat side up in a shallow pan and roast uncovered at 325 for 50 minutes per pound. Now combine: 8 ounces of tomato sauce, 1½ teaspoons onion juice, 3 tbsps. vinegar, 2 tbsps. sugar, 1 tsp. dry mustard and 2 tbsps. Worcestershire sauce. Pour this over the roast about an hour before the end of the roasting time, and baste roast about every 20 minutes during baking time. When roast is done, remove to platter, spoon off fat and pour barbecue sauce into small bowl, adding water to dilute if necessary. Serve boiled onions around the edge and a good accompaniment to the roast is sweet potato ring filled with peas.

Let's Ask Aunt Sal . . .

FIRST off the bat I want to thank all the readers who have sent in answers to questions that have been featured in past months. Some of these questions, for instance the making of butter, have already been allotted all the space we can spare, so I've forwarded these very informative letters to those who first asked for help.

Q.: Could you find one more obliging person who could spare me an old copy (not the revised edition) of the Five Roses Cook Book? — (Mrs. M. M., Pibroch, Alta.)

A.: Apparently these old editions are very scarce or else the owners hate to part with them for I only received three copies . . . and these I mailed to those asking for them. How about it, readers?

Q.: How do you make soft soap . . . the old-fashioned kind that is kept in a crock?—(Mrs. D., Kitscotty, Alta.)

A.: I never made any in my life and I can find little help in my library . . . Is there a reader who can help Mrs. D.?

Q.: My potato chips never turn brown and crisp . . . the way we like them. Why is this? —(Mrs. S. P., Swan River, Man.)

A.: I think you should have

the grease hotter. And another thing be sure to have the chips very dry before immersing them in the hot grease. Either wipe them carefully or place them on a tin plate in the oven to dry them thoroughly first. And one more hint . . . do not fry too many at once . . . just enough so they will float around easily at one time.

Q.: I would like to know how to use goose fat. — (Mrs. K. M., Edmonton, Alta.)

A.: Many people cling to the old-time belief that goose fat has many medicinal properties (for colds, etc.), but I don't care to offer an opinion on this. However, for cooking it can be used in several ways. In dark cakes, cookies (and especially ginger snaps), either goose or chicken fat is very good. Do not use as much of it as butter. 2/3 cup goose or chicken fat equals 1 cup butter. Poultry fats are not advised for frying as they burn so easily.

Q.: Could you tell me how orlon or nylon material compares with cotton or rayon for practical curtains? — (Mrs. J. Drayton Valley, Alta.)

A.: Now that orlon or nylon have got beyond the experimental stage and have proven themselves so practical, they are replacing rayon with most

housewives. They are a stronger fabric, dry so quickly, do not need stretching and wear longer. They are still higher in price than other materials, but they really do not cost more in the long run.

Q.: For years I have used a canning solution when canning vegetables, but now the druggist tells me he cannot procure this any more and advises me to use boracic acid. What do you think? — Mrs. T. C., Picture Butte, Alta.)

A.: I went into a similar question to this very thoroughly about two years back. I contacted both health and agricultural authorities and they agreed there are only two healthful preservatives that should be used in canning either fruits or vegetables. They are salt and sugar (or sugar substitute, on advice of the doctor).

Q.: Is there any way one can whiten piano keys at home? — (Mrs. C. K., Glenbush, Sask.)

A.: Rub the keys with a soft cloth dampened with alcohol. Be very careful not to get any on the wood and wipe the keys right afterwards. To prevent the keys from yellowing, do not keep keyboard closed.

Q.: Would you be kind enough to tell me where I could buy an auto knitter? I have not seen any advertised in farm papers for two years. — (Mrs. F. B., Cluny, Alta.)

Try some of these onion dishes this month

NOT many of us would speak of an onion as, "the rose among roots, the poetic soul of the salad bowl", but Robert Louis Stevenson did and he was by no means the first to mention onions in a poem. We read that onions were considered a great delicacy and were much enjoyed in Ancient Egypt. But for some reason, they are not as generally used today. This is an especially good winter to use onions, for there is an abundant supply of onions of good quality, and they are low in price.

The home economists of the Consumer Section, Canada Department of Agriculture, have some good suggestions for using onions. They remind us that while we use onions as seasonings and in salads and sandwiches, we sometimes forget that they are vegetables and that they can be used in many ways.

Onions may be served either alone or in combination with another vegetable... tomatoes and onions are very good together, and so are onions and string beans. Most families would like onions in a cheese sauce with crispy bits of bacon sprinkled on top. And who doesn't like onions baked to golden brownness around a roast of beef, lamb or pork — they are just as good cooked that way with poultry, too.

But before you cook the onions, you have to buy them. There are three main types of Canadian grown onions, sold in the stores... the Yellow Globe (or more commonly called Yellow Cooking Onion) the large Spanish-type onion and the Red Cooking Onion. There are more of the yellow than of the others, but they are all worth trying.

When shopping for onions, look for those that are hard and that have a bright, clean skin. Do not buy onions that are moist or soggy and that have sprouts. Onions can be stored in a cold, dry, well ventilated cupboard. If a part of an onion is left over, it can be kept in the refrigerator or if it is well wrapped in foil or waxed paper. When it comes to cooking onions, they should be cooked only until tender, not soft, for overcooking

A.: A few years back we were able to secure one for a reader, but I, too, have not seen any advertised for some time. Is there any reader who has one for sale?

Q.: Please send me recipes on preparing herring. — (Mrs. N. S., Sheho, Sask.)

A.: Write to the Dept. of Fisheries, Ottawa, Ontario, and they will send you a fine booklet all about preparing fish.

Note: All readers are invited to send in their home-making problems to Aunt Sal, in care of the Farm and Ranch Review, Calgary, Alberta. If you wish a private reply enclose a stamped, self-addressed envelope. There is no charge for this service.

causes an unpleasant odour and an undesirable color.

Stuffed Onions

If you haven't served stuffed onions at your house recently, that would be a good suggestion for lunch or dinner very soon. To make stuffed onions, you first cook the onions, fairly large ones, (one for each serving) in boiling salted water, covered of course. Boil for 20 minutes or until the onions are tender, but not soft. Or, cook in the pressure cooker. Then remove and chop a part of the center, leaving the outside rings as a shell. Add the chopped onion to the stuffing and fill the shells. Put the onions in a shallow baking pan and bake in a moderately hot oven of 375° F., for 30 minutes.

The home economists have some very good suggestions for the stuffing too. They say that it may be a savoury bread one or it may be a mixture of other vegetables and bread crumbs. A mixture of kernel corn with the bread crumbs; and bread crumbs, canned tomatoes and any kind of chopped meat make a very tasty filling. Left-overs can very easily be used as a stuffing for onions, too. Baked beans seasoned with chili sauce go well in baked onions. Your family will never know they are getting left-over macaroni and cheese if you use it as a stuffing for onions.

Since onions and potatoes are plentiful and very low in price this year, here are suggestions for using them together. Potato and Onion Puff made from an equal quantity of potatoes and onions is an excellent topping for meat pies or casseroles. You make the Puff by cooking the potatoes and onions together, then mashing them.

Season with salt and pepper and beat until fluffy. Pile lightly on the meat pie or casserole and bake in a moderately hot oven, of 375° F., until it is golden brown. For extra flavor, sprinkle the puff with grated cheese or paprika. A good potato scallop with a generous amount of onions is very good during cold weather. The home economists also suggest Potato and Onion Pancakes.

Potato and Onion Pancakes

- 2 cups grated raw potatoes
- ¾ cup grated raw onions
- 2 eggs
- 2 tablespoons flour
- ¼ teaspoon baking powder
- 1 teaspoon salt
- ⅛ teaspoon pepper

Combine the potatoes, onions and eggs. Blend well together. Sift the flour, baking powder, salt and pepper together and add to the potato and onion mixture. Again, blend well together. Drop by spoonfuls to a hot griddle or lightly greased frying pan. Cook until brown on one side (about four minutes). Turn and cook until brown on the other side. This

recipe makes 24 medium pancakes which would serve six as a main dish, for lunch or supper.

These pancakes are such a nice golden brown that they do not need a sauce. The home economists suggest serving them with sausages and a crispy salad.

Waterless Cooking

QUESTION: "Could you tell me if waterless cooking is best, and if so, what type of pot to use? I am thinking of stainless-steel or aluminum cast pots. Is aluminum harmful? Do pressure cookers kill vitamins? — (Whitecourt, Alta.)

Ans.: Research has shown that more flavor, vitamins and minerals are retained in foods when a minimum of liquid is used in cooking. For this reason, the so-called waterless method of cooking is generally

a good one. However, with some vegetables such as onions, it may be desirable to lessen the strong flavor by using more water.

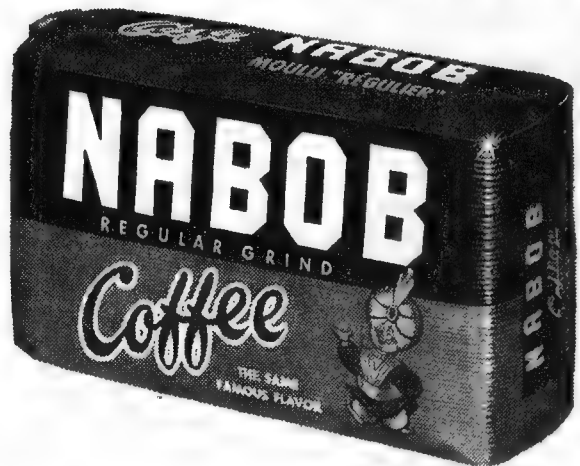
Waterless cooking may be done in any type of heavy, thick-bottomed pot, whether of stainless steel or cast aluminum. However, unless stainless steel pots have a copper coating on the bottom, food will have a tendency to stick. Otherwise one metal has no advantage over the other. Aluminum pots are not harmful. In fact, aluminum occurs naturally and harmlessly in many foods.

Any kind of cooking method destroys some vitamins. The use of pressure saucepans (not the big pressure canners) according to the maker's directions, is a very satisfactory cooking method and actually causes less destruction of some vitamins than other methods using more water and a longer cooking time.—CAC Consumer Research Department.



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More minerals for pigs? Not in Alberta

SHOULD we be feeding our pigs a wider variety of minerals in Alberta? Not according to tests at the University of Alberta. Dr. J. P. Bowland of the Department of Animal Science is in charge of the tests. Ground limestone and iodized salt definitely should be provided, he says, but for growing and fattening pigs neither phosphorus nor trace elements need be added to our usual practical rations.

Farm grown grains on which Alberta swine rations are based are deficient in calcium and salt, but their analysis has shown no need to supplement phosphorus. It is for animals fed roughages rather than concentrates that additional phosphorus is likely to be needed.

As for trace elements, feeders have known that most common practical swine rations in Alberta contained enough of these. But with use of antibiotics for swine feeding the question arose as to whether the more rapid gains might influence mineral requirements. The tests showed, however, that adding the trace elements manganese or cobalt, or a mixture of manganese, cobalt, iron, copper, magnesium and zinc, did not influence rate of gain or feed efficiency.

Of interest, too, are results of a big feeding trial in which the commercial product, "Feed-Ani", is being used. The Department of Animal Science reports no benefit observed from the use of this supplement and an appreciable increase in the cost of gain. A note in the Canadian Journal of Agricultural Science, July-August, 1953, indicates similar results at the University of Saskatchewan.

At the University of Alberta, Feed-Ani is being fed as 2 per cent of the ration and as free choice at the same time. To the present, average daily gain of pigs receiving this product has been 1.32 lbs. per pig per day compared with 1.39 lbs. for the control lot receiving no Feed-Ani. Feed efficiency figures summarized to the end of the growing period show 309 lbs. of feed per 100 lbs. gain for the control lot as against 321 lbs. of feed for the Feed-Ani lot, the research men advise.

From experiments to date, it would seem that supplemental minerals other than iodized salt and limestone are not required in Alberta swine rations. Necessary supplements, such as protein of good quality, calcium,

iodized salt and vitamins A and D, pay for themselves many times over, Dr. Bowland says. Unnecessary supplements to rations for swine are merely an added expense.

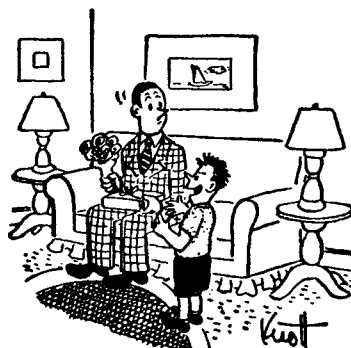
More Grass in 1954

SINCE the close of war in 1945 the trend in our agricultural production has been characterized by increased emphasis upon grain crops. Progress toward an increased use of grass crops and the maintaining of herds and flocks has already been held in abeyance. The trend followed has been aided by the mechanization of farms and has been supported, until recently, by markets capable of absorbing the increased annual total yields of grain.

Timely and adequate rainfall over most of the West, together with improved varieties, the absence of extensive losses due to disease or insects, and improved workmanship on the part of farmers with modern equipment, have served to maintain high average yields. The period has been one of moderate prosperity.

This era of production now appears to be nearing an end. The demand for grain in relation to production as shown by market reactions in 1952, and more particularly in 1953, has served to make us conscious that the continuation of the production plan followed since 1945 may not provide the best assurance of farm income, and that the pattern of the past thirteen years may not fit future needs.

Associated with our emphasis in recent years upon grain production has been a marked increase in the menace of weeds, and particularly of wild oats.



"Your making progress! Last week she checked your credit rating and discussed your future with your boss."

The soil, too, in certain districts, is showing evidence of deterioration in physical structure and as a consequence is more vulnerable to erosion. A gradual increase in the acreage devoted to grass and to livestock warrants consideration for 1954.

Fire danger from heaters

A CONSIDERABLE number of persons throughout Saskatchewan are converting space heaters (both oil and coal-fired) into furnaces.

These people build a casing around a space heater and use it as a furnace, or install a space heater inside an actual furnace casing. The fire commissioner's office emphasized that improperly constructed or installed heating appliances and equipment present a fire hazard, and may endanger human life and property. Stoves, furnaces and heaters were the third leading causes of fire last year in Saskatchewan.

Designing a furnace is an engineering problem that takes expert work and knowledge. Too many factors are involved for the amateur or handy man to do a good and fire-safe job, the statement continued.

Where a space heater is totally enclosed by a furnace and no provision made for air access to the combustion chamber through the external casing, the updraft of hot-air currents from the heating surfaces above the fire detracts from the chimney draft. Dangerous gases may thus escape into the house resulting in asphyxiation of the residents, an explosion, or both.

No one should attempt to convert a space heater into a furnace, the statement emphasized, since results are far less desirable, (with the dangers involved), than could be obtained by the purchase of a regular furnace. There are approved oil-fired furnaces on the market which have the simple operating characteristics of space heaters and that are safe as furnaces.

Space heaters should be used for the purpose originally designed by the manufacturer and approved by authorities, and not converted to do a job they were not meant to do.

There is no substitute for safe, standard heating, the statement added. In a province such as Saskatchewan, where climate makes heating an important necessity throughout much of the year, good approved standard manufactured furnaces and heaters are essential. Money spent in obtaining and maintaining such heating equipment, it pointed out, is "sound economy indeed".

All pork, other than canned pork, purchased by the federal government under its price support policy has been disposed of at or above the support price at which it was purchased.

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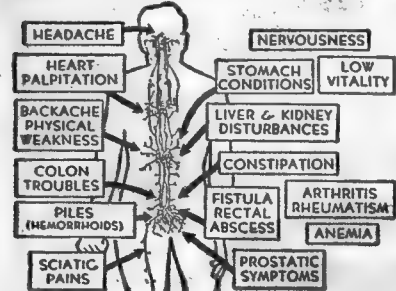
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The use of packers with the one-way disc

WHEN the one-way disc or one-way disc harrow (discer) with seeder-box is used for seeding, the surface soil is partially turned and placed loosely over and around the seed. Packing of this soil is essential to firm it around the seed to promote rapid and uniform germination.

The type of packer that is most satisfactory is one that will not pulverize the soil, but will pack effectively, carry surface trash to the bottom of the disc furrow, and will not plug or clog with moist soil and trash.

The surface packer is not satisfactory. To pack the soil to the bottom of the furrow with this type of packer it is necessary to weight it very heavily. The soil is left in a pulverized condition, very susceptible to drifting. Very frequently when packing with this type of packer, the small weeds which have been turned up by the disc will continue to grow.

The packer commonly known as the sub-surface packer has proved to be most satisfactory under the majority of field conditions in Southwestern Saskatchewan. The sub-surface packer, when correctly weighted, will pack through the trash to the bottom of the furrow, firming the soil around the seed. This is accomplished with the minimum amount of soil pulverization and the surface soil is left quite loose, thereby permitting the small weeds to die.

In addition to the sub-surface packer, the rod weeder and the diamond and flexible harrow are very often used following the combination tillage and seeding machine. Not only will they firm the soil but also destroy the small surface weeds.

When to overhaul

WHEN winter comes and the season's work is done many farmers wonder if they should overhaul their tractor engines or let them go another season.

An engine will generally operate long after it has worn to the point where it is not efficient. On the other hand if an engine is overhauled too soon the cost of the overhaul cannot be made up in increased efficiency.

There is no set rule for deciding when an overhaul is due but there are symptoms such as lack of power and excessive oil consumption which indicate the need for an overhaul. The engine should first be checked to make sure the lack of power is not caused by some minor misadjustment, or that oil consumption is not caused by leaks.

A compression test will also indicate the condition of an engine. The test should be made by a repairman who is able to judge the condition from the results of the test.

When a tractor has lost enough power so that it has to be run in the next lower gear, it is an indication that it has lost a large percentage of its original power. For example, when pulling a 2,000-pound load (equivalent to 12 to 14 feet of disk), each mile per hour of speed requires 5½ horsepower. This shows that if the tractor speed has to be reduced one gear there is a loss of at least five horsepower and in all probability the fuel consumption will be as high as for the faster gear.

continue to draw away from the continent's practical capacity to support cattle and in the years ahead, demand pressure is likely to be continent-wide with the threat of beef surpluses almost certainly disappearing.

Forage Crops on the Farm

PERENNIAL grasses and legumes are an essential crop on every farm where livestock is kept. They can be used either as pasture or hay over a period of many years without reseeded, and if good management practices are followed they will provide a profitable return.

There has been an attitude on the part of many farmers to dismiss the growing of cultivated forage crops as a difficult task that does not deserve much bother. Many tried to establish grass during the dry thirties and failures resulting from those efforts are still vivid in their minds. Actually, forage crops are not difficult to establish during normal climatic conditions if reasonable care is taken during seeding.

Grass and legume seed is small and must be planted shallow, the seedlings grow slowly, and to facilitate quick establishment a minimum of weeds should be present on the land so that they will not smother the small grass and legume plants.

A good seed-bed for fall seeding is uncultivated stubble land, while for spring seeding well worked firm land is best. Spring seeding should be done as early as possible and not after the grain crop has been seeded. Grasses and legumes establish best during the cool part of spring.

After the grass-legume crop has been established good hay crops can usually be harvested during the first two or three crop years, and after that the stand becomes thicker and growth is shorter, so that the forage is best utilized as pasture. To maintain the legume in the field one hay crop only should be harvested per season on dry land and the pasture should not be grazed during August. To avoid the occurrence of bloat on grass-legume pastures they should be grazed steadily from late May until August. Cattle and sheep should not be turned into lush growth of a legume unless they are carefully watched.

For all seedings grass-legume mixtures should be used. Ladak alfalfa is the most useful legume, while brome grass, crested wheat grass, intermediate wheatgrass and Russian wild rye grass are the most suitable grasses for most farms.

Durum wheat is commanding a premium of 70 cents a bushel over spring wheat in sales being made by the Wheat Board.

Canada is our big beef market

NO Canadian is likely to underestimate the importance of the United States market for our surplus beef cattle, but with talk about trade restrictions and tariffs on this continent, it should be understood that the number of cattle sent to the United States in an average year is of small consequence in relation to the total number sent to slaughter from within that country. Producers on that side of the International boundary have practically nothing to fear from imports of Canadian cattle.

A year's delivery of 300,000 or 350,000 head of Canadian cattle to markets in the United States would represent only one per cent or less of the number that will be slaughtered for domestic consumption this year. United States beef consumption is expected to exceed 70 pounds per capita in 1953

and over 80 pounds when veal is included. To accommodate this level of consumption, cattle and calf slaughter for the year is expected to be about 34 million head.

Canadian consumption of beef is up also which explains why relatively few cattle have been available for export. For the first eight months of 1953 only 27,860 head of beef cattle crossed the border and at this rate, the total 1953 deliveries would provide American people with their current beef rations for not more than half a day.

North American cattle population is at a record high point. United States has 94 million head; Mexico has something over 15 million head and Canada has between 9 million and 10 million head. Numbers are expected to remain high for another year or two. But in the long run, human population will

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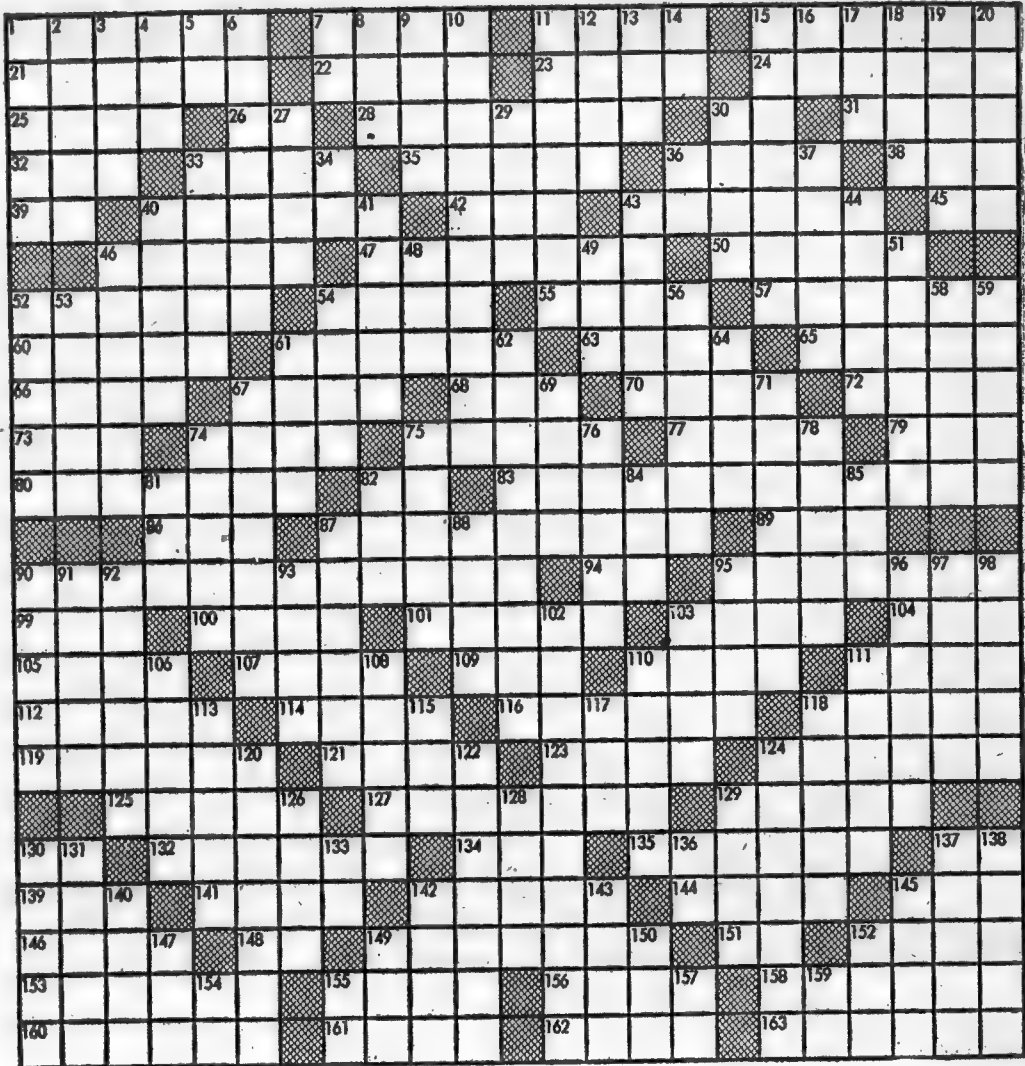
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HORIZONTAL

- | | | |
|-----------------------------|---|--------------------------------------|
| 1 An obelisk of the East | 65 City of Egypt | 116 Sharpens, as razor |
| 7 Flock | 66 Slamese coins | 118 Sorceress in the Odyssey |
| 11 Vessel | 67 Win | 119 Calm |
| 15 Having a veil (Bot.) | 68 Pronoun | 121 To cut after snick |
| 21 Girl graduate | 70 Consumes | 123 Buzzes |
| 22 Fancy carrying case | 72 Clothes | 124 Trough in which fodder is placed |
| 23 River of Italy | 73 Observe | 125 English town |
| 24 Hardened | 74 Lapse | 127 To deviate |
| 25 Breathe in quick gasps | 75 Minute groove | 128 Poetic shield |
| 26 Depart | 77 Number (pl.) | 130 Child for father |
| 28 Having a handle | 79 Buddhist pillar | 132 Flowers |
| 30 Indian mulberry | 80 Eccentric | 134 Feminine name |
| 31 Circlet | 82 Symbol for platinum | 135 Attempt |
| 32 Greenland Eskimo | 83 Science of building | 137 1100 (Rom. num.) |
| 33 Legume | 86 Obscure | 139 Elevated transportation lines |
| 35 Leans | 87 After the manner of real life | 141 Ireland |
| 36 Law | 89 Period of time | 142 Staff |
| 38 Compass point | 90 Censure | 144 Military assistant |
| 39 Prefix: down | 94 Sacred Hindu word | 145 Norse goddess of the dead |
| 40 Virgil's birthplace | 95 Make believe | 146 To confine |
| 42 By birth | 99 Anglo-Saxon coin | 148 Symbol for tellurium |
| 43 Native | 100 To authenticate | 149 More prepared |
| 45 Plural ending | 101 Gloomy | 151 Pronoun |
| 46 Mongrels | 103 Boat's complement | 152 Spanish room |
| 47 Globes | 104 Extinct bird | 153 Shy |
| 50 Rio -----, Spanish river | 105 Polynesian chestnut | 155 Portion |
| 52 River of Europe | 107 A rivulet | 156 Kind of duck |
| 54 Covering for foot | 109 Sea eagle | 158 Female relatives |
| 55 To be saucy to | 110 A monk's cowl | 160 Raised platforms |
| 57 Strait | 111 Canvas shelter | 161 Wall molding |
| 60 Worms | 112 Musical exercise | 162 Heraldry: grafted |
| 61 Swerves | 114 One who brings legal action against | 163 Prize set in any contest |

VERTICAL

- | | | |
|----------------------------------|---|------------------------------------|
| 1 Palatable | 44 Grand -----, Alps | 96 To come out |
| 2 Winged | 46 Title of respect | 97 Temporarily |
| 3 The moon goddess | 48 American author | 98 Stamp for impressing date |
| 4 Danish territorial division | 49 To bring forth | 102 Kind of coal |
| 5 Article | 51 Preparation of ground gold for gliding | 103 Policemen (slang) |
| 6 Purplish shade of red | 52 To rent | 106 Skillful |
| 7 Pronoun | 53 Compound ether | 108 Loans |
| 8 Greek letter | 54 Liner | 110 Residences |
| 9 Dwarf | 56 Quiescent | 111 Dye |
| 10 Cut off in one's will | 58 Castle in Essex, England | 113 To follow |
| 11 Beats | 59 To devastate | 116 Brazilian coin |
| 12 Native metals | 61 Levantine ketch | 117 Floor covering |
| 13 Also | 62 Sieves | 118 Cut, as meat |
| 14 Toward | 64 Let it stand | 120 Stone tools |
| 15 Knave | 67 Faint, unsteady light | 122 To avoid |
| 16 Printer's measure | 69 Title of respect (pl.) | 124 Horses who have never won race |
| 17 One of a Persian race | 71 Scoffed | 126 Muck |
| 18 Sharp edge in moldings (var.) | 74 Piggins | 128 Wife of Geraint |
| 19 Taut | 75 Sober | 129 Neat |
| 20 Borders | 76 One who plays a role | 130 River of New Mexico |
| 27 Cereal grain (pl.) | 78 Kind of propeller | 131 Up |
| 29 In shelter | 81 To sum up | 133 Hebrew letter |
| 30 Female relative | 82 To fondle | 136 Symbol for tantalum |
| 33 Receptacles for washing | 84 Pronoun | 137 Skirmish |
| 34 Greek letter | 85 Make lace edging | 138 Iik |
| 36 Symbol for radon | 87 Genus of rails | 140 Lounge |
| 37 Heating apparatus (pl.) | 88 Knowledge | 142 Withered |
| 40 Silences | 90 Part of apple (pl.) | 143 Sharp |
| 41 Of a deathly pallor | 91 To make speech | 145 To chop |
| 43 Offspring | 92 General character | 147 Bar of metal |
| | 93 River nymph | 149 Tattered cloth |
| | 95 Paid athletes | 150 Rodent |
| | | 152 Body of water |
| | | 154 A direction |
| | | 155 River of Italy |
| | | 157 French article |
| | | 159 Pronoun |

Solution Next Month

Country Diary

MARCH of course is the month of Mars. In ancient days it might have been that men devoted only one month to the god of war. Now warfare covers the whole year. Later on it was called "hlyd-math", loud or stormy month, by the Anglo-Saxons, and when the Julian calendar was adopted, March was moved from the first month to the third.

Now, in early March, we are accustomed to a lowering sky, the color of the grey goose, and days that seem to strengthen with the cold as they lengthen in light. So long the winter! Will it ever be Spring? Yes! The oft-remembered sounds, colors, activities of bird and beast, all the well-known familiar things, old but forever fascinating, are soon to greet us—an inevitable phase of life is the answer.

Sandro Botticelli, the great Italian painter [1444-1510]

who is renowned for his decoration of the Sistine Chapel, painted an allegorical picture of Spring, the famous and inspiring Primavera, in which the ethereal, airy figures typify the four divisions of life — youth, love, maturity, age. Similarly Nature has its equivalent phases — leafing, flowering, fruiting and withering, and Spring, as Botticelli has portrayed so delightfully is the season of young things.

The cold, scientific name for the arrival of Spring is the Vernal Equinox. This denotes the time when the sun crosses the plane of the earth's equator, making day and night of equal length, approximately on March 21st. Dry facts learned from text-books! How much more pleasant to study Botticelli's Primavera.

Just now when we are nearing winter's end and the beginning of Spring, some of us

country folk are showing signs of boredom. We are "fed-up" so to speak with all the things that go with winter — icy winds, snow shovelling, ashes, mitts and overshoes, storm-doors and windows, wood piled in the kitchen and so on. No wonder we get the doldrums. Grandma had a cure for them. About this time of year she used to mix up the sulphur and molasses for a family tonic, to help chase end-of-the-winter lethargy. Whether the old or modern way is more effective I can't say, but the way we do it now with vitamin pills and orange juice is certainly more pleasant.

But there are always a certain number of optimists among us, who towards the end of March begin their search for signs of Spring — a fascinating hobby and always good for inspiring conversation in the store and at farm meetings. Someone always spots the first robin in March, or the first crow, though the robin is the most sought after, and is promptly reported on the front page of the local newspaper. But I have never personally known an authentic first-robin-spotter, even in a mild, soft March, though I have met some who have known some who claim to have seen the Spring visitor about this time. So I cannot put the first robin in the verifiable class of seasonal phenomena.

The Task of Education is World Peace

By A. L. MARKS

THE most wholesome, the most helpful, and at the same time the most terrifying thing in the world is truth. Most wholesome because of its eventual necessity. Most helpful because of its essential dependability. Most terrifying because of its persistence.

The only adequate approach to truth is the will to acknowledge it when discovered, to accept it, and then to surrender oneself to its guidance. That is why God is truth. That is why He has to be. That is why He conquers even death itself; and that is why, also, He has to be love.

We evade the requirements of truth in human relations when we attempt to argue with the background of our fellows, instead of accepting it as a fact, studying it honestly, and trying to understand it.

We must start with ourselves, for out of our own hearts are all the issues of life as we must learn them.

Peace, personal peace, is both

the result and the reward of righteousness; for righteousness is nothing but the eternal search for truth inspired by the will to love. Loving each other is both easy and natural for "we are members one of another," as St. Paul has said, most truly.

To have world peace each of us requires to be saved from his own worst enemy — himself — as has been aptly said in the poem, "The Way", which goes like this: "No foe without may match the foe within. Aside from selfishness there is no sin. Obedience to God, through Christ, is still salvation's way, by man's surrendered will: and righteousness for man, below, above, is searching for the truth with will to love."

So world peace, which is the condition of the Kingdom of God, is within each of us.

Let Universal Education show us the way. Let us agree to permit it to assume its normal and necessary task of disclosing and imparting to each of us a true understanding of life.

varieties were ready to graze by June 15, but wheat and rye were not ready for use until some 10 days later.

The results of these tests indicate that cereals, and particularly oats and barley, provide satisfactory pasture from mid-June to mid-October. Recommended pasture varieties are those recommended for cereal production, while seeding and tillage practices should follow approved practices for the district concerned. A suggested carrying capacity is one acre per cow and calf, or the equivalent, for 100 to 110 days of grazing after mid-June.

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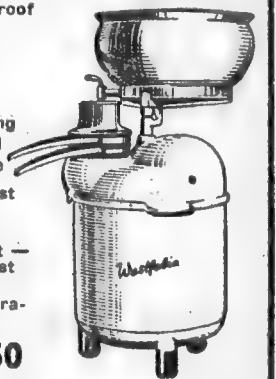
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Cereal crops for pasture

PASTURE yields of over 3,500 pounds per acre have been produced by oat and barley varieties on summerfallow at the Swift Current Experimental Station. Vantage barley and Fortune oats have been the highest yielders, while Ajax oats and Titan barley have followed closely. All of these crops have produced enough forage per acre to pasture a mature cow and her calf or the equivalent for from 100 to 120 days.

Wheat and rye varieties have produced less pasturage than either oats or barley, with yields varying from 2,500 to 3,100 pounds per acre. Chinook and Rescue wheat have been the most productive of this group.

These crops were seeded early in May. Pasturing started when the leaf growth was about 8 inches tall, and some 500 pounds of forage had been produced per acre. Oat and barley



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*58
Drawbar HP.
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5-2

8-4

15-5

14-3

11-4

20-1

5-4

20-3

30-6

31-2

30-4

23-5

4-2

30-2

15-3

26-1

18-9

28-8

10-5

15-2

20-4

10-2

20-6

25-4

9-3

30-3


29-7


20-5

25-2

SUBTRACTION DRAWING

FIRST WRITE DOWN ALL THE ANSWERS TO THE SUBTRACTION EXAMPLES AT THE LEFT. THEN IF THEY ARE CORRECT YOU CAN PROVE THEM BY CONNECTING THE DOTS IN THE LOWER GROUP OF NUMBERS IN THE ORDER OF YOUR ANSWERS, READING DOWNWARD FROM THE TOP. WHEN COMPLETED, A PICTURE WILL APPEAR.

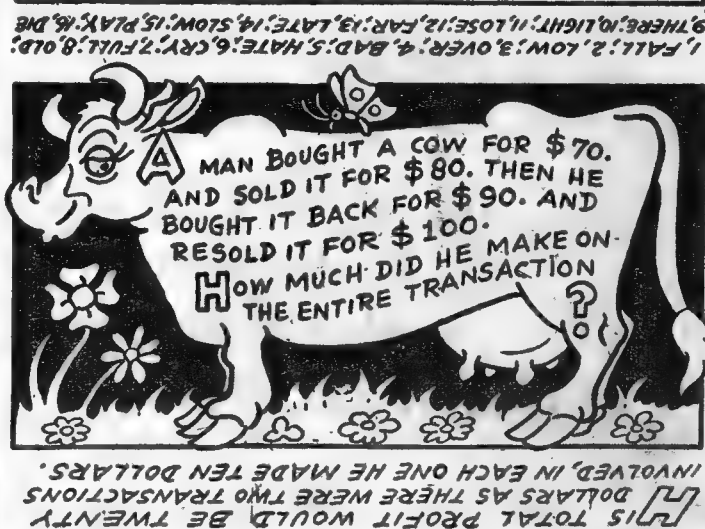




TEST YOUR WITS

THERE ARE VARIOUS ANTONYMS TO SOME OF THE WORDS LISTED. TRY TO WRITE THE MOST NATURAL OPPOSITE WORD IN EACH CASE, AS COLD IS THE OPPOSITE OF HOT

1 RISE	9 HERE
2 HIGH	10 DARK
3 UNDER	11 WIN
4 GOOD	12 NEAR
5 LOVE	13 EARLY
6 LAUGH	14 FAST
7 EMPTY	15 WORK
8 NEW	16 LIVE

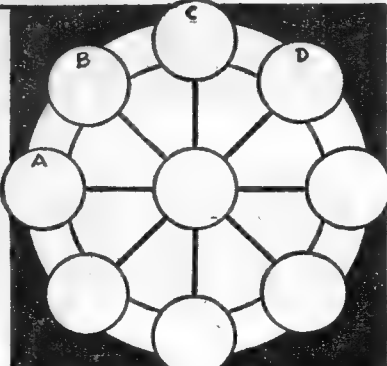


A MAN BOUGHT A COW FOR \$70. AND SOLD IT FOR \$80. THEN HE BOUGHT IT BACK FOR \$90. AND RESOLD IT FOR \$100. **H**OW MUCH DID HE MAKE ON THE ENTIRE TRANSACTION?

SOLUTION: HIS TOTAL PROFIT WOULD BE TWENTY DOLLARS AS THERE WERE TWO TRANSACTIONS INVOLVED, IN EACH ONE HE MADE TEN DOLLARS.

2 · 7 · 12 · 17 · 22 · 27 · 32 · 37 · 42

WRITE THE ABOVE NINE NUMBERS IN THE CIRCLES TO MAKE EACH OF THE FOUR STRAIGHT LINES OF FIGURES ADD TO EXACTLY 66




MAGIC

PLACE A PIECE OF PAPER OVER AN ENVELOPE AND WRITE A NAME ON IT SUGGESTED BY YOUR FRIEND.

OPEN THE ENVELOPE AND THE NAME WILL APPEAR ON AN ENCLOSED SLIP OF PAPER.

THE SECRET: AN INSERTED PIECE OF CARBON PAPER PRODUCES A COPY ON THE INSIDE PAPER.



PULP GAME



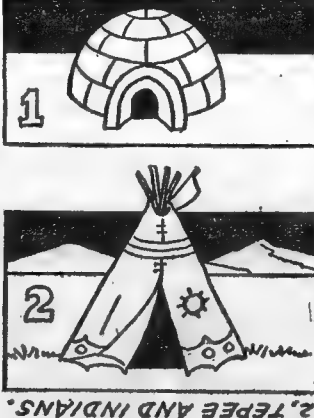
SIX KINDS OF TREES WERE USED TO MAKE A SPECIAL WOOD PULP.

USE ONLY THE LETTERS IN "PULP GAME" TO SPELL THE SIX TREES.

ANSWER: APPLE, ELM, GUM, MAPLE, PALM, PLUM.

TOTS TEST

CAN YOU NAME THESE TWO HOMES AND THE PEOPLE WHO LIVE IN THEM?

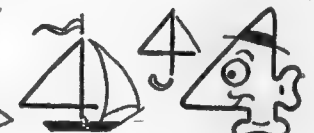


1 BEEHIVE AND BEEKEEPERS

2 TEEPEE AND INDIANS

KIDDIE CORNER

WHAT CAN YOU DRAW BY ADDING A FEW LINES TO THE NUMBER 4? FOR EXAMPLE

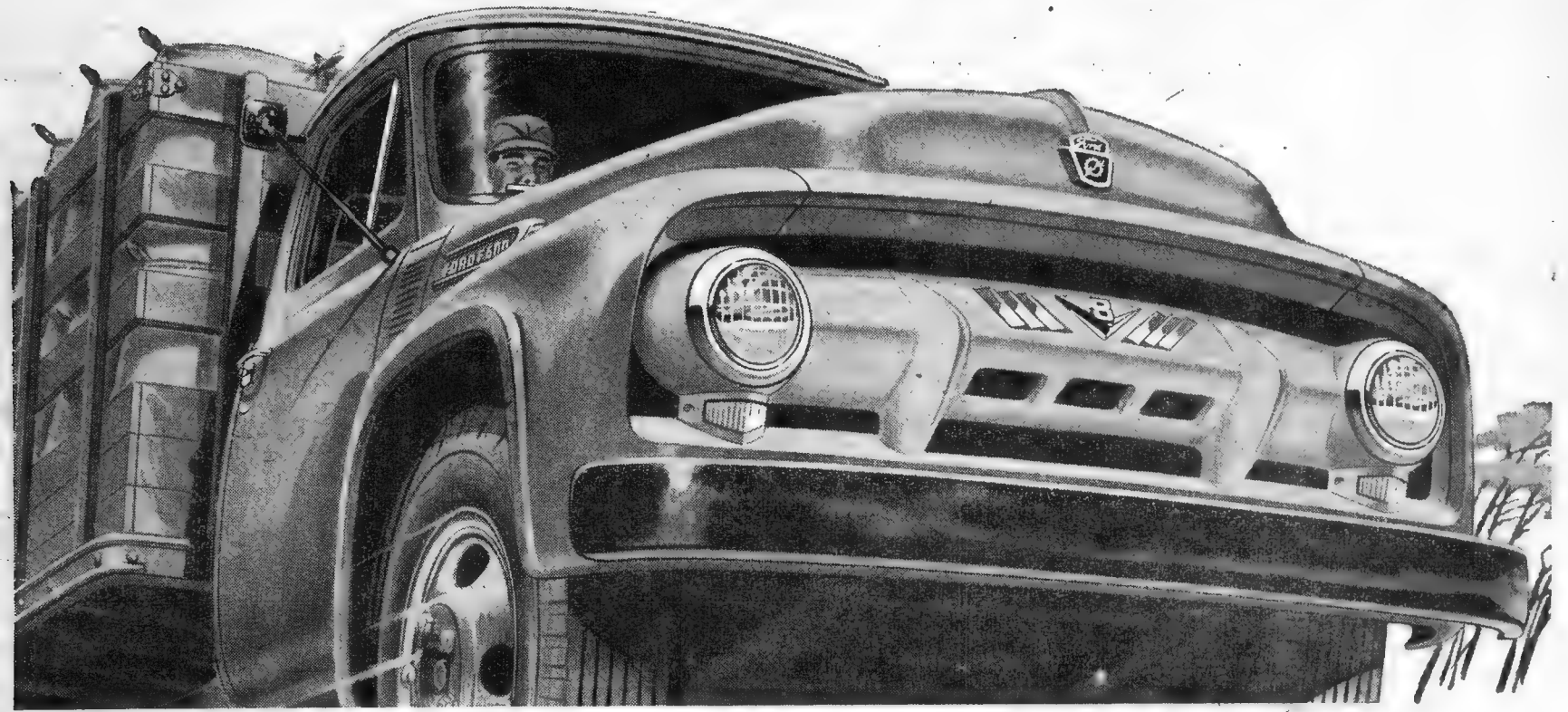


REARRANGE THE LETTERS IN EACH OF THE FOUR WORDS, READING ACROSS, TO SPELL FOUR WORDS THAT WILL READ THE SAME ACROSS AS DOWN.

P	E	S	T
T	I	E	D
D	I	E	T
S	T	E	P

SOLUTION: 1, STEP; 2, TIDE; 3, EDIT; 4, PETS.

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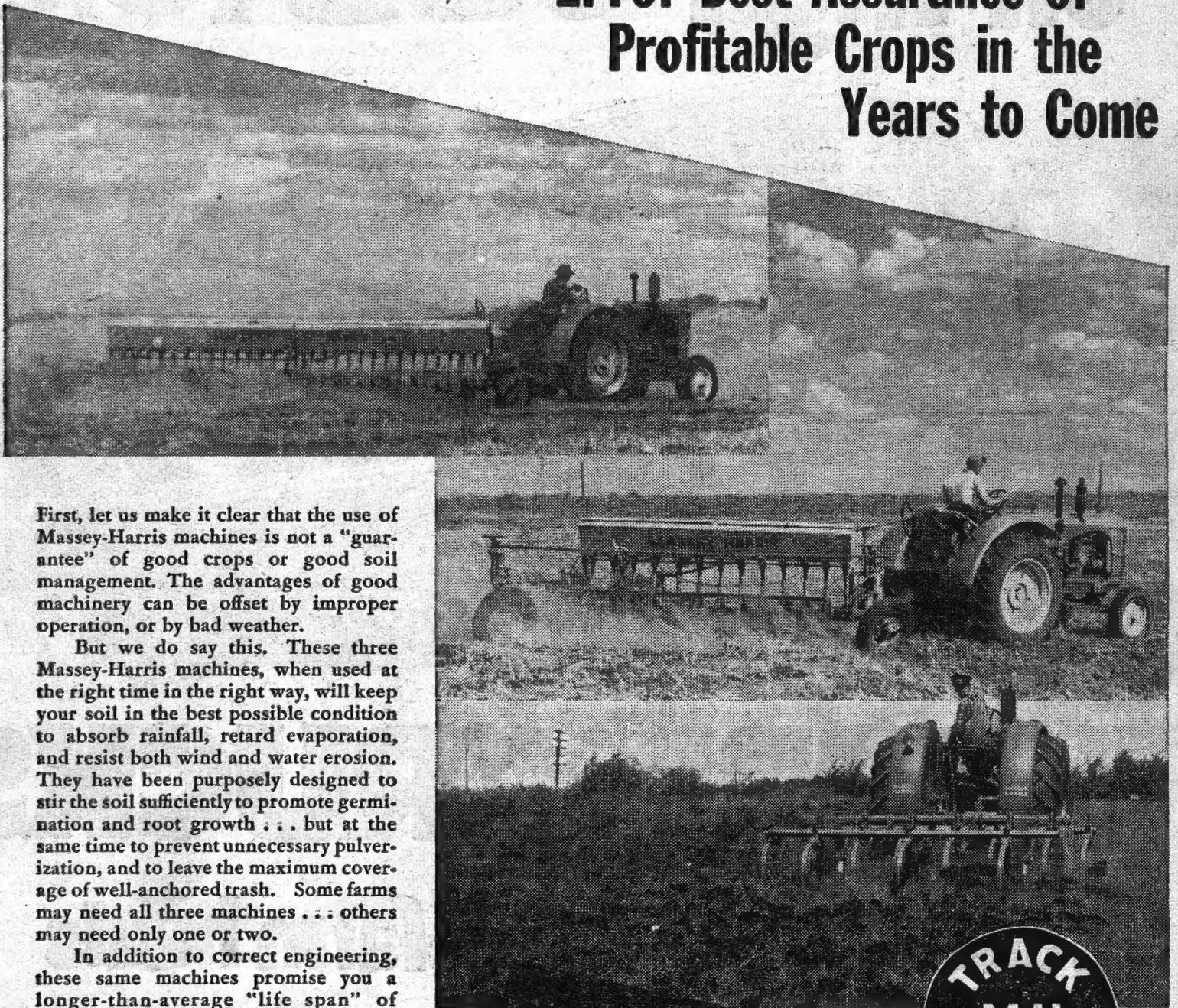
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**IRREGULAR
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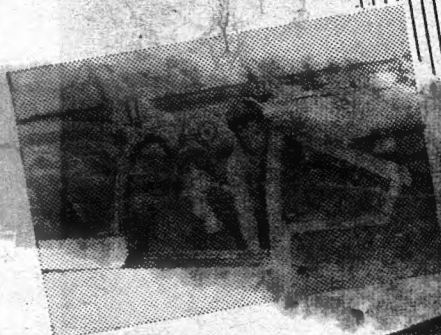
EX LIBRIS
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RADAR



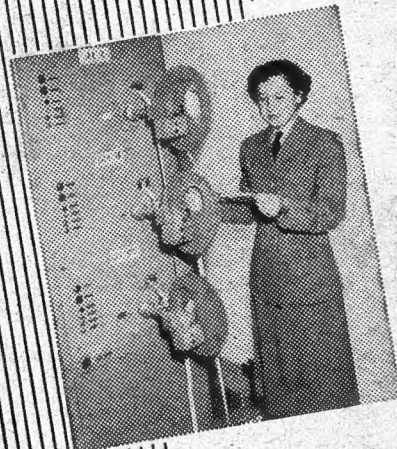
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TARGET



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(Surname).....(Christian Name).....
STREET ADDRESS.....
CITY.....PROVINCE.....
EDUCATION (by grade and province).....
AGE.....

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